

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

LIS 3010 MODULE TWO: APPLICATION OF ICTs IN INFORMATION MANAGEMENT

Introduction

In this module, you will learn how to design a website using Extensible Hypertext Markup Language (XHTML) and Cascading Style Sheets (CSS). Further you will learn how to host and manage a website. It is divided into **six** units.

In unit one, will explain the concepts and basic theories of web page design. It is in unit one you will learn the types of websites and uses of websites in modern society. This unit will also explain the history of XHTML and the role of the World Wide Web Consortium in the development of the Web.

Unit two explains tools needed for website designing. It also explains the differences between XHTML and HTML 4.01. Further, you will learn types of tags. It will also show you the basic structure of any XHTML web page.

Unit three, Thereafter, you will learn how to use various formatting tags create the contents of your web page.

In unit four, you will learn how to create tables and forms

Unit five will introduce you to the world of Cascading style sheets (CSS). You will learn how to use different CSS properties and values to do among other things; create background color and image.

In unit six, you will learn how to host your website by booking the domain name and hosting space.

Aims

This module aims at explaining step by step how to create a website using XHTML. It also aims at explaining and showing how to use Cascading style sheet (CSS) to decorate the website. Further it aims at explaining the procedures for website hosting.

Objectives

At the end this module, you should be able to do the following:

- Explain the basic concepts of website designing
- Use XHTML to create website

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

- Use CSS to decorate the website
- Know procedure for hosting the website
- Know procedure for hosting the website



Time frame

You will require **two** months to finish this module

Study Skills

For you to understand the contents of this module, you need to begin with the first unit. Units are interrelated so do not skip one unit or else you will not understand the contents of this module.



Need help?

For any help, please contact the Institute's learner support officer, **Mr. Mwewa**.



Assessment

Continuous assessment for LIS 3010 course will be 60%. You will require to do **three** practical assignments and **one** test during residential school; all carrying equal marks of **15%**. The final examination will carry only **40%**.



Resources needed

For you to do this course, you need a computer with at least a RAM of 512 Mb.

In addition, you will need text books and articles in the areas of website designing, HTML, XHTML, HTML5 and CSS. You need to visit the W3 Schools website for more valuable information on website design.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

UNIT ONE: Concepts and theories of website designing

Introduction

This unit explains the basic concepts regarding website designing. It begins by defining major concepts such as webpage and website. It further explains the two types of websites and the uses of websites in modern society. This unit also explains the role of the World Wide Web Consortium (W3C).

Aims

The aims of this unit are to explain the basic concept and theories of website designing; explaining the types and uses of websites in society. It further aims at explaining the role of the W3C in the development of the Web.

Objectives

At the end of this unit, you should be able to do the following:

- Define terms such as webpage and website
- Explain types and uses of websites
- Explain the role of W3C in Web development



Equipment needed

No equipment is needed to cover this unit.



Other Resources

Castro, E (2003). *HTML for the World Wide Web: with XHTML and CSS*. 5th Ed. Berkeley: Pearson Education

Deitel.P.J and Deitel.H.M (2009). *Internet & World Wide Web: How to Program*. New York: Pearson Educational International

Deitel.P.J and Deitel.H.M (2003). *C++: How to Program*. 4th Ed. New York: Pearson Educational International

Lavanya, L (2011). *HTML 5: Magic wand for Web Designing*. Chennai: Ane Books Pvt Ltd.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Musciano,C and Kennedy, B (20007).*HTML & XHTML: The Definitive Guide*. Chennai: Shroff Publishers & Distributors PVT.LTD

Schultz, D and Cook, C (2007). *Beginning HTML with CSS and XHTML: Modern Guide and Reference*.New York: Press



Time Frame

You need **One** week to finish studying this unit.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

1.1 Introduction

Websites have become important in modern society. They have become indispensable in this click society. Organizations and people are creating websites to perform number a number of things including marketing goods and services. It is also important to mention that the languages that are being used to design websites are increasingly becoming sophisticated. We now have XHTML, HTML5 and CSS as some of the basic web development languages. For dynamic and versatile websites, website designers introduce more sophisticated web programming languages such as PHP (Hypertext Preprocessor) and JQuery and Java Scripting.

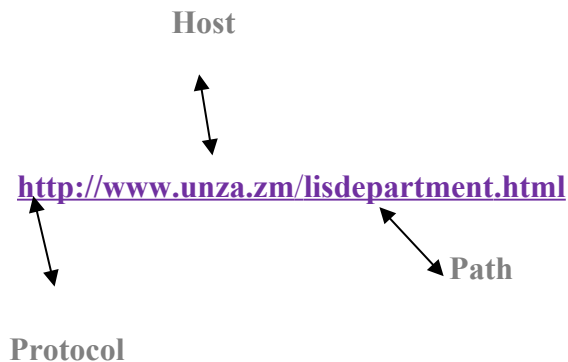
1.2 What is a website

A website (spelled as web site) is a collection of related *web pages*, images, videos or other digital assets. It is a collection of web pages and other digital resources that inter linked through hypertext markup language technologies. These web pages are addressed to a universal resource locator (URL) and found on the World Wide Web (a multimedia component of the Internet).

1.3 What is then a universal resource locator?

According to Behrouz (2006:522), a universal resource locator is a standard for specifying any kind of information on the World Wide Web and the Internet. The universal resource locator consists of a *protocol*, *host*, and the *root path* ('/') for the web page or image you want to retrieve on the Internet.

Below is an example of the URL for web pages for the LIS department on the University of Zambia Website.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

http

These letters stands for Hyper Text Transfer Protocol. This is one of the protocols or methods used when retrieving or getting web pages and other digital resources on the Internet.

www.unza.zm

This represents the Host. The computer where that web page or digital resource you want to retrieve is stored or kept. In this case the digital resource you want to retrieve and access in on UNZA computers

lisdepartment.html

This represents the path name of the file where the pages or digital resource is located. In this case, the web page LIS department is located on UNZA computer on the file called *lisdepartment.html*.

If you want to access the web page *lisdepartment.html*, you should first specify the protocol you will use to access this page on the web. In this case is HTTP protocol. Thereafter, you need to write the host (the name of the computer where the page is kept) and finally the path leading to the file called *lisdepartment.html*.

Note: You have seen in the above example of a universal resource that the port is omitted. This is because it is optional. A port is a number assigned to a server on a network and normally it is inserted between the host and the path. A server is a computer where web pages and other digital resources are kept.

In simpler terms, a universal resource locator is an address that enables you to locate the web pages, images, videos etc on the Web. You should look at a universal resource locator as a physical address for the place where you want to get something from.

If for instance you coming from Eastern province to go and get a Laptop from House number 934, New Avondale in Lusaka, you have first to know how to get to Lusaka (you should

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

determine the mode of transport to reach there), then go to Avondale. After reaching Avondale, you should locate New Avondale (because there old and new Avondale), and then find house no. 934.

In the above analog, determining the mode of transport to get to Lusaka and Avondale House no. 934 represents the protocol to use when retrieving digital resources on the Web. To get digital resources on the Web, you need to use the HTTP protocol.

The place Lusaka represents a host- the place where New Avondale is found and House No.934 represents New Avondale represents a path where a Laptop you want to get is kept or stored.

1.4 What is a web page?

From the above definition of a website, you have learnt that a website is made up of **web pages, images, and sounds** etc that are connected to a universal resource locator. Well, that is easy for you to remember. However, we have not defined what a web page is.

A web page is a document written in plain text interspersed with formatting instructions of Hypertext Markup Language (HTML, XHTML, and HTML5). A web page may incorporate elements from other websites with suitable markup anchors. Anchors are links that connect a web page to another or to an external website.

1.5 Does a website have a structure?

Yes, websites do have structures. They normally have a hierarchical structure. They have a family tree structure. Websites structures resemble that of human beings; composed of parents, children, grand children etc. The home page of a website represents a parent and other web pages within the same website represent children and grand children the home page is linked to the other web pages.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Example of a Website

Structure

In the above diagram, the University of Zambia website takes a family tree structure. UNZA Home page is the parent which has schools as children. Then these schools have also children which are grad children to the UNZA Home Page. The School of Education for instance has children in name of departments such as LIS, Adult Education and Special Education which are grand children to UNZA Home page.

1.6 Types of websites

There are basically two types of website, namely; static and dynamic websites.

a) Static Website

A static website is one that has web pages stored on the server in the format that is sent to a client web browser. It is coded or written in Hypertext Markup Language (HTML) and the web pages are sent in this coding format to the browser for interpretation so that the user can understand. Static websites present pre-defined static information to the user. This type of website usually displays the same information to all visitors. They are similar to a printed brochure. You appreciate that fact that the majority of the websites on the World Wide Web are static websites. Examples of static websites include ABCD, OpenBilio and Koha download websites. Visit these download websites by searching them in the search engines such as Google.

b) Dynamic website

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

A dynamic website on the other hand is a website whose contents change in response to the users' query. It is a website whose contents are stored in a MySQL database. Dynamic websites are built using XHTML and other web programming languages such as PHP and Java Scripting Language. UNZA website and The Post News Paper website are examples of Dynamic websites. These dynamic websites are now being created using contents management systems such as [Wordpress](#), [Drupal](#) and [Joomla](#). For example, UNZA' website created and runs on Joomla. Most of the online newspapers such as Lusaka Times are created using Wordpress. These contents management systems allow the creation of websites that are interactive and intelligent.

1.7 Uses of websites in modern society

Websites in modern society are used to achieve so many things. Some are the below uses of websites:

a) Marketing and selling of goods and services

In today's world, you can acknowledge the fact that many organizations and people have designed websites that they use to market and sell their goods. For instance one can buy a car from Japan on websites such [tradecarview.com](#). You can also buy books from America from websites such as [www.amazon.com](#).

b) Dissemination of information

Websites are vital tools in dissemination of information. Many organizations employ websites to disseminate information to clients and stakeholders. In this regard, governments all over the world have started using websites to reach out to their general citizenry. For instance, the Electoral Commission of Zambia (ECZ) in Zambia was using its website to give Zambians information on how to register as voters and where to register.

c) Solicitation of opinion/information

Apart from disseminating information, websites are used for soliciting opinion from the clients and stake holders. For instance, the government of Zambia used the National Constitution

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Review Commission website to get opinions of the Zambians on what should be and not included in the constitution.

Other uses of websites include jobs recruitment and advertisement.

1.8 World Wide Web consortium (W3C)

This consortium came into being after the birth of The World Wide Web in the early 1990s. Bernard Lee invented the WWW in 1994. The role of W3C is to supervise the development of the web. This includes the responsibility of developing and approving web programming languages such as XHTML and PHP and validation of websites that have been designed before they put online. The validation is important in the sense that it ensures that there compliance to the set standards in website designing. Once you have finished designing a website, you need to send it to W3C for validation on the following website address <http://validator.w3.org>. The W3C validator acts like a spell check. It checks all the websites written in HTML/XHTML language for errors. Membership to the W3C is open to all organizations and individuals at a fee.

1.9 Tools for website designing

Like a carpenter who needs tools such as hammers and nails, a website designer like you need tools to be able to design a website. These tools include:

a) Web Editor

A web editor is a software or program that helps you to write the contents of your website using languages such as XHTML, CSS, JAVA Script and PHP etc. Common editors to programmers include [Notepad](#) and [Notepad++](#).

- **Notepad**

This is an editor which inbuilt in all windows operating systems. They come with all the windows operating system. Therefore, you do not need to install them like other editors. To check if your computer has the default **notepad**, click **Start menu**, then click **All Programs**. After that click **Accessories** then choose **Notepad**. This Notepad can write the contents of a

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

website using many programming languages without problems. However, it does not color the tags of your web page as you will see with other editors.

- **Notepad++**

The second editor called Note Pad+++ is software that you need to download and install on your computer. It is free. When download please choose the .exe version not the .Zip one. For Windows operating system, download and install Notepad++. Download it from <http://notepad-plus-plus.org/>. It is free and open source software. This is the editor will use to design our website.

- **WYSIWYG**

It is important to mention to you that there other web editors which are called WYSIWYG (What You See Is What You Get). Examples of these include Dream weaver. These editors programs that enable you to design a website even if you do not know how to program in XHTML and other web based programming languages. These programs have already made templates where you just fit in your information for your website.

Note: For those using Linux flavors such as Ubuntu, there is a variety to use. You can use default editors such as [gedit](#) and the usual [notepad](#). If you want fancy ones, you can install [Bluefish Editor](#).

b) Software to compress images and sound

You need software to compress pictures and sound so that they size conforms to the standard set by the W3C. Pictures/ image should be compressed and become less than 300 pixels so that they become lighter to ensure fast loading when users want to view them on the web. There is a number of software that can help you to compress your image. These include *Microsoft picture manager* and *Ifarnview*. Picture manager is a free program that comes with all the windows operating systems. To check if your computer has it just click **Start menu**, then choose **All Programs**, then click **Accessories** and then pick **Picture manager**. If you cannot see picture manager using the above method, you can go to any picture saved on your computer, then right

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

click on it and when it gives you options, choose open with Picture manager, you see that your computer indeed has this tool for compressing image.

How to Compress the Image?

Open your photo with **picture manager**, and then choose **Picture** option on the top bar of window. Thereafter choose **compress pictures** and you will see a small window on the right hand side opening. Options on this window include *don't compress*, *documents*, *web pages* and *E-mail messages*. Choose **web pages** and the image will be compress to suit the web standard. Sound such as songs and video should also be compressed so that they become lighter. This entails reducing them in size from gigabytes and megabytes to kilobytes. Let them be less than 80 KB in size. Software to compress sound and video include *The Blaze Media Pro software*. Some of the sound and video compressing software can be down loaded free from the Internet.

Note that the more compress the image or sound, they more you lose on the quality. For image, they become more unclear.

c) Web Browser

According to Deitel (2009; 28), a web browser is software /program that allows the users to access the web's contents. Deitel explains clearly in the definition the function of a web browser but you will not need the browser to access the web contents but to preview what the contents of your website you are writing in XHTML and other languages. Browsers are the only program that are able to read and interpreted a document written in XHTML into the format that the viewers can understand. So when you write the contents of your web page in XHTML language, a browser will interpret into the format you will appreciate and understand. Examples of web browsers include *Internet Explorer*, *Mozilla Fire Fox*, *Opera* and *Safar*. By the way, these web browsers are free. You can download and install on your computer. For Internet Explorer, you don't need to down load and install because it comes with all Microsoft Operating Systems such as Windows XP, Vista and Windows 7 and 8. Once you finish installing one of the Microsoft Operating Systems, Internet Explorer will appear among the Programs that have been installed on your computer. This explains why Internet Explorer is the most common web browser

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

because it is embedded in all the Microsoft Operating Systems and the majority of the people the world use Microsoft Operating systems. For website design, I would like to encourage you to have more than two web browsers running on your computer. In addition to Internet Explorer, download and install Mozilla Fire Fox. It is advisable to have many browsers because all these browsers have weaknesses in the way the displaying a web page written in XHTML and CSS. Therefore the two browsers will complement each other.

For those using Linux, Mozilla Fire Fox is already installed. You can however install other browsers such as Google Chrome.



Summary

In this unit, we have learnt that a website is a collection of related web pages, images sound, etc that are linked to the universal resource locator. A web page is a document written in plain text interspersed by formatting instructions of hyper text markup language (HTML/XHTML). Further, we learnt that websites have hierarchical (family tree) structure. Unit one has also revealed to us that there are basically two types of websites; namely **static** and **dynamic** websites. Static websites are those whose contents do not change. They display information in the manner a brochure does while dynamic websites whose contents change according to the user's query. This implies that different users will see different contents when they visit a dynamic website. It has also been discovered that websites are used for marketing and selling of goods and services. They are also used for dissemination of information and solicitation of opinion and information from organization's clients and steak holders. Further, we have learnt that W3C is non-governmental organization responsible for web development. To be precise, it sets standards that should be followed for web site designing and general development of the web. This unit has also explained to us the tools that we need for website designing. These tools are **web editor**, **image and sound compressing software** and **web browser**. You need a web editor to be able to write the contents of your website and compressing software are needed to reduce the size of image, sound and video so that they become lighter in order to encourage fast

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

loading of your web pages. A web browser is necessary to be able to preview the contents of your website you are writing in web editor using languages such as XHTML.



Activity (questions)

Answer the following below questions without referring to the Module:

- Visit any website and look at how it is structured.
- List and explain the tools needed for website designing.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Unit 2: Introduction to XHTML and Types of XHTML Tags

Introduction

Unit 2 ushers you into the practical world of website designing with XHTML. This unit begins by explaining to you the history of XHTML. Thereafter, it explains the fundamental differences between XHTML and HTML. Further, it will explain the types of tags and the structure of a well constructed web page. This unit will also explain and show the basic content formatting tags of types of XHTML.

Aims

This unit attempts to explain the historical and types of XHTML tags. It also aims at explaining the differences between XHTML and HTML. It further aims at demonstrating how basic formatting tags are used to create the web contents.

Objectives

After the end of this unit, you should be able to do the following:

- Explain the history and development of XHTML
- Explain the differences between XHTML and HTML
- Explain types of XHTML tags
- Create a well structured web page of XHTML

Resources

You need a computer which should have atleast two web browsers installed on it (*Internet explorer* and *Fire Fox*). It should also have a web editor called Note pad+++. Check if your computer has the above mentioned tools. If does not have, download and install them on your computer.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Addition Resources

You need books and other information resources that deal with website designing using XHTML.

Below are some of the books that can supplement this module:

1. Castro, E (2003). *HTML for the World Wide Web: with XHTML and CSS*. 5th Ed. Berkeley: Pearson Education
2. Deitel.P.J and Deitel.H.M (2009). *Internet & World Wide Web: How to Program*. New York: Pearson Educational International
3. Deitel.P.J and Deitel.H.M (2003). *C++: How to Program*. 4th Ed. New York: Pearson Educational International
4. Lavanya, L (2011). *HTML 5: Magic wand for Web Designing*. Chennai: Ane Books Pvt Ltd.
5. Musciano,C and Kennedy, B (20007).*HTML & XHTML: The Definitive Guide*. Chennai: Shroff Publishers & Distributors PVT.LTD
6. Schultz, D and Cook, C (2007). *Beginning HTML with CSS and XHTML: Modern Guide and Reference*.New York: Press



Time Frame

You need **One** week to finish this unit.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

2.1 Introduction

The W3C has developed and approved many web programming languages. These include among others; HTML 4.01, XHTML, HTML5, CSS, PHP, JQuery, and Java Scripting. These are other languages are being used to design modern websites. Among the above mentioned languages, HTML 4.01, XHTML, HTML5 and CSS are the basic web designing languages. You can not have a web page without these languages. In this module, we learn how to create a web page and subsequently a website from scratch using XHTML.

2.2 Meaning of XHTML

The letters **XHTML** stand for **Extensible Hyper Text Markup Language**. This is not a full-fledged programming language but a text formatting language. XHTML is basic language used by all website designers. It is a markup language used to format the contents of a web page. Put simply, it is a foundation language used in designing all manner of websites (namely static and dynamic websites). It is a language that is used in formatting the contents of any website. Unlike procedural programming languages such as C++ and Java, XHTML is a markup language that specifies the format of the text that is displayed in a web browser. XHTML is a legacy technology of the World Wide Web Consortium. Like any markup language, XHTML is made up of tags. A tag is made up of a less and greater than symbols (<>). It begins with “<” and ends with “>” symbol. It is within these two symbols a name of a tag is placed as shown below:

```
<big>
```

2.3 Types of XHTML Tags

There are basically two types of tags; namely **paired** and **stand alone** tags.

a). Paired tags

Paired tags come as a pair of two; opening and closing tags. They have partners. They could be likened to married couples.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Example

```
<p> </p>
```

```
<li> </li>
```

This is a paired tag used to create a paragraph in a web page. It is a paired tag; it has the opening and closing tags. The other paired tag is the list tag used to create lists in a web page.

b).Stand alone tags

Standalone tags are single tags but carries / symbol before the closing greater than symbol. They do not have a partner; they are single tags.

Examples

```
<hr />
```

```
<br />
```

The first tag in the above example is used to create a horizontal line while the last one is used to create a break among text in a webpage.

It is cardinal to mention here that some tags do have **attributes** and **values**. Attributes describe the tags and these attributes have values that should always be put in inverted commas (“”). For paired tags, these attributes and values are placed in the opening tag as shown below.

```
<body color=“red”> </body>
```

In the above, example, we are telling the browser to display the body (contents) of a web page in red colour. **Note** that the declaration of color and other decorative tags in XHTML tags is being discouraged. Such as decorations are now being done in Cascading Style Sheets (CSS) which we shall learn in the subsequent units. For numerical values, the omission of inverted commas for the values will not result in an error. However, values in text, string etc should always be put in inverted commas.

2.4 Historical background of XHTML

The famous XHTML has evolved from HTML. HTML stands for Hyper Text Markup Language.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

HTML came from SGML (**Standard General Markup Language**). SGML was dumped because it was complex. HTML latest and last release is version 4.01. It is being phased out gradually by the W3C. XHTML (**Extensible Hypertext Markup Language**) has come to replace HTML. **Note** that XHTML 1.0 is similar to HTML 4.01.

XHTML is being supported by all browsers. XHTML is defined as HTML application

XML (**Extensible markup language**). It is more clean and strict than HTML. XML is a language that requires all documents to be clearly marked. It is a language that allows the web developer to create her own tags; this entails that tags are not predefined by the W3C as it is the case in XHTML and HTML. The developer himself or her has the latitude to define the tags that should however in line with the XML approved structural framework. XML is said to be a stable language for document interchange among different computer platforms as it supports **interoperability**. Meaning that different computers running on different operating systems such as Windows and Linux could exchange data or documents without problems as long as the documents or data are formatted in XML.

The W3C was compelled to develop a strict language such as XHTML because many documents (web pages) on the W3 are wrongly and poorly marked. Therefore, small devices (mobile phones) struggled to read such pages hence the need to combine XML (**strict language**) and HTML (**less strict language**).

It is important to mention here that the WC3 has in December (2014) approved another new version of HTML which is called **HTML5**. It said to take over from XHTML. HTML5 has tags that mirror our English language words. For example, there is a tag called **big**. It is used to display the text of a web page **big**. The idea of developing such tags is to enable the Web go **semantic**; begin to use words that are closer to our human languages.

2.5 Specific differences between HTML and XHTML

There are a number of differences between XHTML and HTML. These include the following:

- i) In XHTML, it is mandatory for each web page to have a document declaration statement shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0  
Transitional//EN""http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

In this statement, we declare that the HTML document being written will be a public document by virtual of being put of the Internet which is a public infrastructure. Secondly, we declare the version of XHTML being used to create the web page. In this case we are using version 1.0 which is transitional and it will be in English language. We further go on to give the universal resource locator for the W3C, the organization responsible for approving web programming languages. In HTML, this document declaration statement was not compulsory. The same has now been adopted for HTML5.

ii) If one wants to nest (putting) other tags inside other tags that process ought to be properly done shown below.

```
<h3><i>Welcome to my website</i></h3>
```

In this example, the <h3> is a heading tag in which we nest an italic <i> tag. The tag being nested is inside the nester. If this process is not properly done, you will see errors.

NOT

```
<h3><i>Welcome to my website</h3> </i>
```

In the above example, there is a problem on the closing tag of <h3> as it suppose to outside the italic closing tag </i>. This will surely creating errors. HTML was more forgiving. One can get away with such mistakes.

iii) Empty elements (stand alone tags) must be closed properly as shown below.

```
<hr />
```

```
<br />
```

NOT

```
<hr>
```

```
<br>
```

This will create errors in XHTML 1.0

iv) All HTML paired tags (elements) should be properly closed as shown in the examples below.

```
<p>ghhhjjjjj</p>
```

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

`<body>tthahah</body>`

NOT

`<p> hhhh`

`<body>tttt`

Failure to close the closing tag will definitely results in errors. It is mandatory in XHTML to close the closing tags of paired tags.

v) Attributes of the elements should be in lower case and values of attributes be enclosed in inverted commas as shown below.

`<body color="yellow">`

NOT

`<BODY COLOR=yellow>`

Failure to put the attributes values in inverted commas will result in errors. For this example, we wanted the body of a web page to have the colour yellow. However, if you don't put that value yellow in inverted commas we will not see the colour yellow.

vi) Attribute minimization is not allowed in XHTML. You are not allowed to write in full the attribute names and their values as shown below.

`<input readonly="readonly">`

`<input checked="checked">`

In the above examples, we are creating the form with input type of data to be just read-only (not editable) and the other example, we want a form with input data that could be checked or ticked.

NOT

`<input readonly>`

`<input checked>`

2.6 Parts of a web page

A typical XHTML web page has the following parts:

a) **The document declaration statement/tag**

`<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0`

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Transitional//EN""http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

This is the first and top part of any XHTML web page.

b) An outer HTML

This is the second part of any web page. It has the **html** tag; which is the mother of all the tags.

This is because all the web page tags are nested within the html opening and closing tags. The html tag has attributes and their values as shown below.

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

Here you nest all the web page tags

```
</html>
```

c) The head

This is the third section of a web page. In this section, you will find the head tag which in turn has the title tag (where the title of the web page is written). Further, all meta data tags that contain information which describe the contents of a web page are found in the <head> tags.

```
<head>
```

```
<title> Home page</title>
```

```
<meta />
```

```
<meta />
```

```
</head>
```

Note that the head and title tags are nested in the html tags.

d) The body

The body is where you put all the contents of a web page. The pictures, text, Audio-visual materials are put in this area. The body section is also nested between the opening and closing tags of html tags.

```
<body>
```

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Where the web page contents are written

```
</body>
```

Example of a consolidated framework or structure of an XHTML web page

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
```

```
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="">
```

```
    <head>
```

```
        <title>Title of document</title>
```

```
        <meta />
```

```
    </head>
```

```
    <body>
```

```
        Contents here.....
```

```
    </body>
```

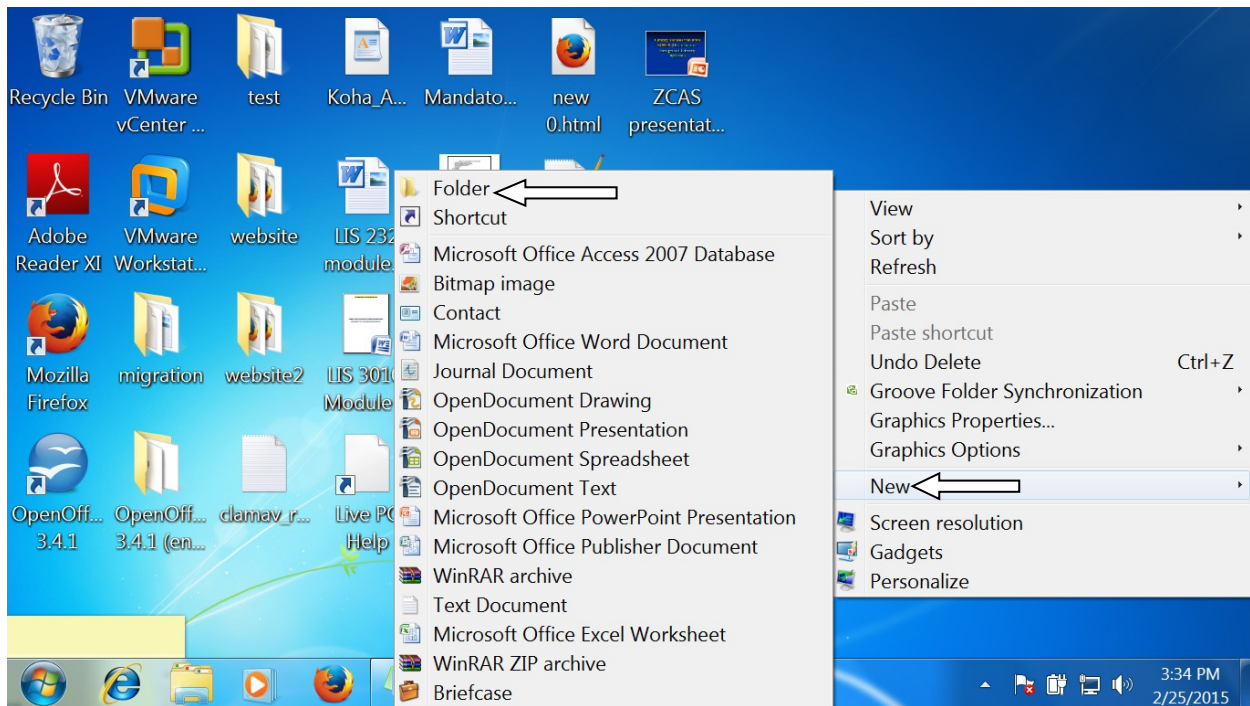
```
</html>
```

2.7 Practical web page designing

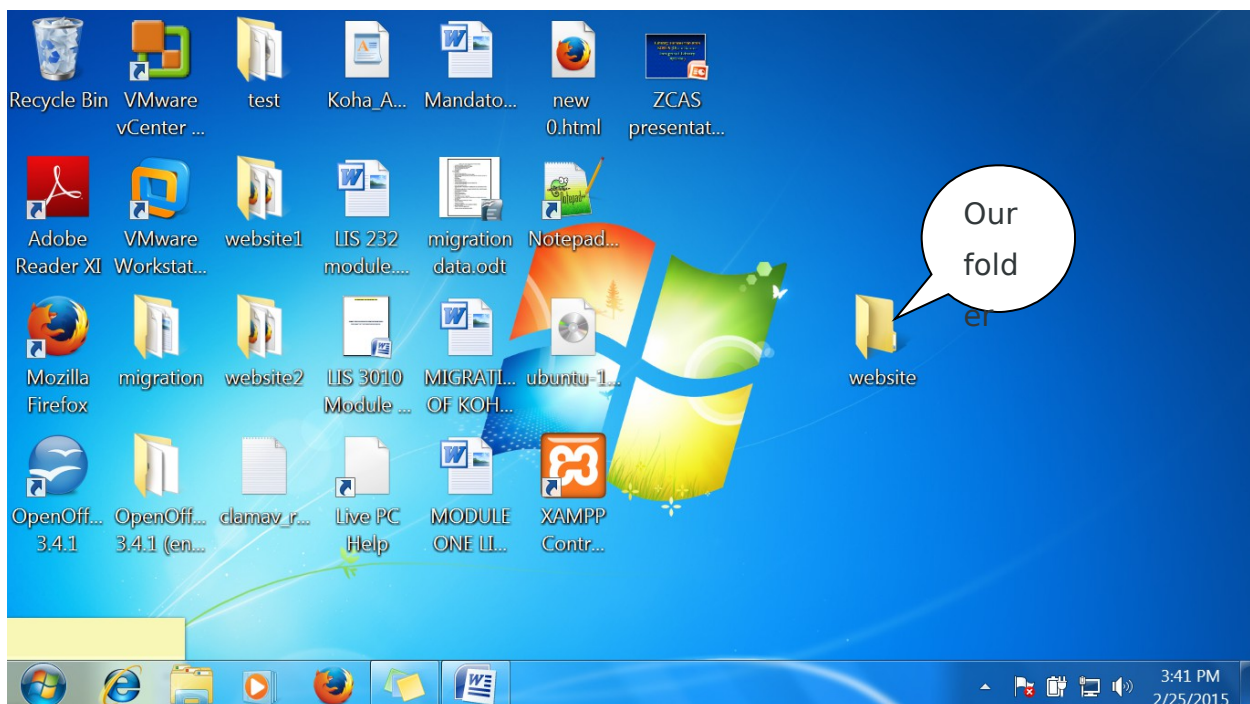
a) Creation of working folder

Before you begin creating your web page, you need to create a working folder called **website** on the Desktop where you will be saving all the XHTML web pages and their images. To create, the folder, go to the Desktop, right click on the Desktop and choose **New** then click on **Folder**.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



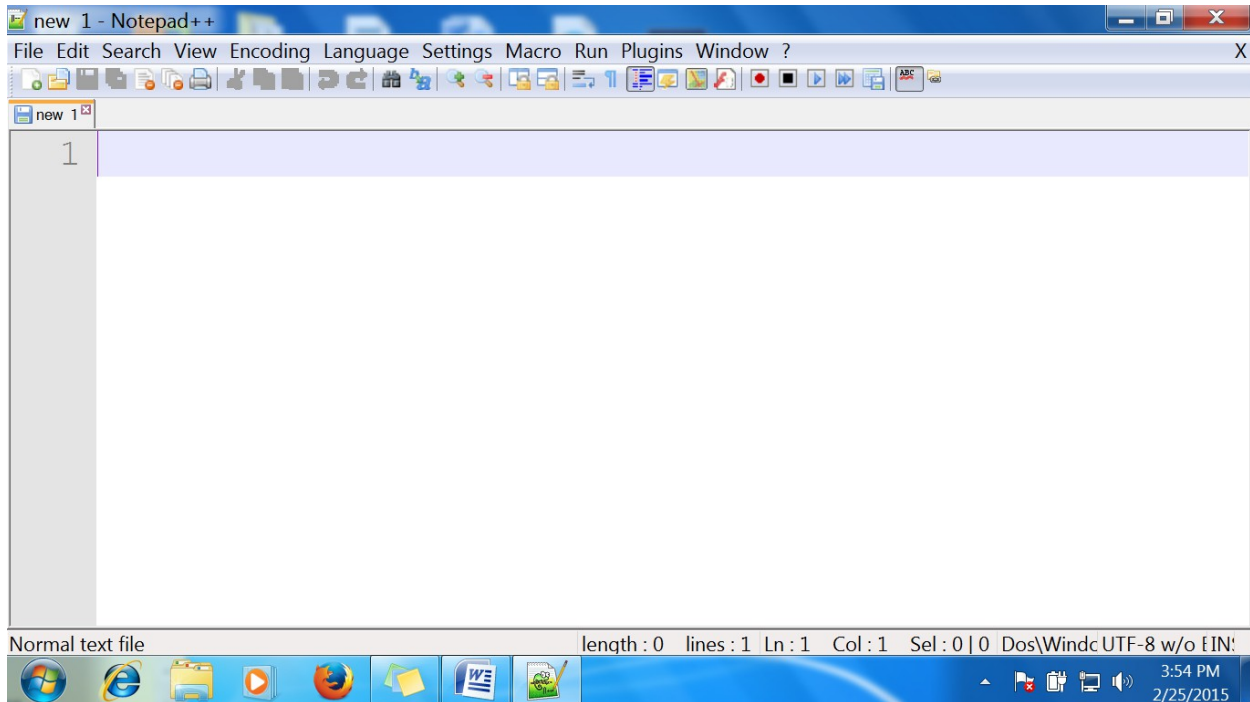
Then name that folder as **website**. Use small letters to name this folder. If you look at the screen shot below, you will see the folder called website created. This is where we will be saving all the XHTML webpages that we will be created for our website.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

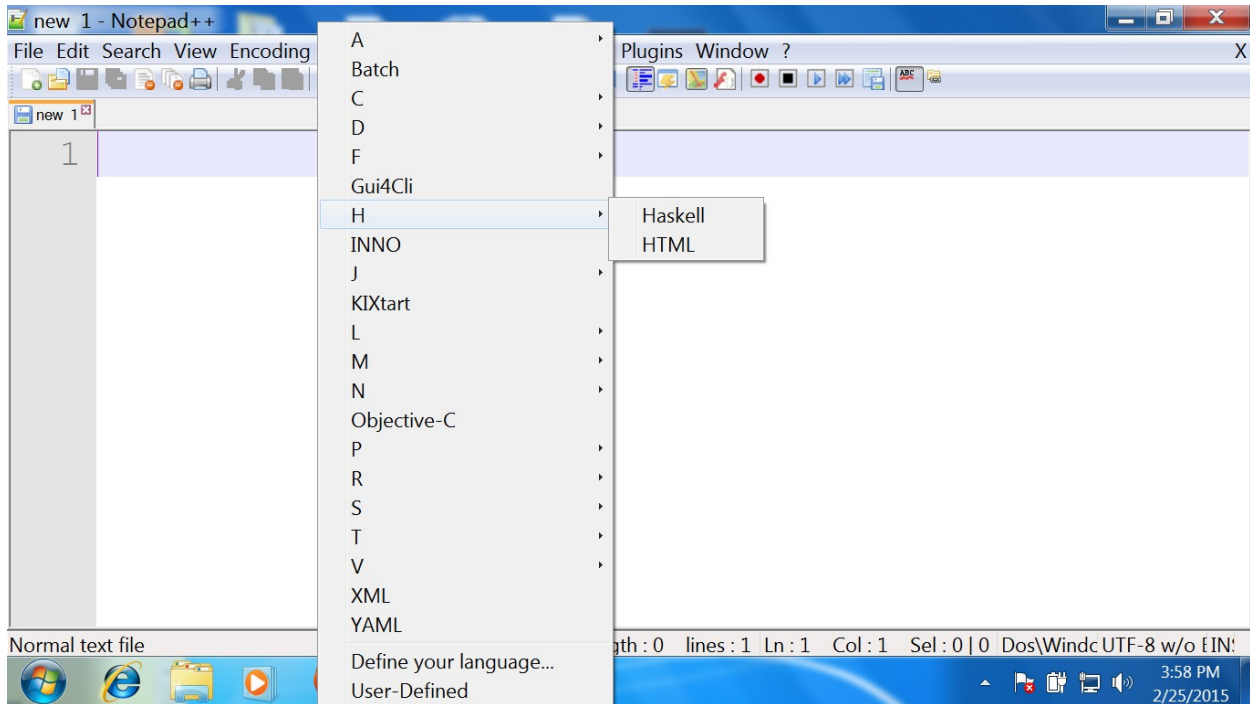
b) Opening Notepad++

Having created our working folder, we need to open your notepad++ so that we can begin writing the contents of our first web page. The blank Notepad++ will look as shown below.



Having opened a new Notepad++ blank page, familiarize yourself with top bar icons. These icons include **file**, **edit**, **search**, **view**, **encoding**, **language** etc. To save what we have been typing, we need click on **file**, then click on **save as**. It is similar to our Microsoft Office Word. Alternatively, we can click on the save icon. To choose the language in which we are programming, click on **language** then choose the appropriate language; in case of XHTML, click on **H** where you will find all HTML languages.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



c) Creation of the basic webpage structure

The basic web page structure which we have discussed earlier, where there is a document **declaration statement**, **html header**, and **body tags** need to be written in our blank XHTML page.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
```

```
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="">
```

```
  <head>
```

```
    <title>Title of document</title>
```

```
    <meta />
```

```
  </head>
```

```
  <body>
```

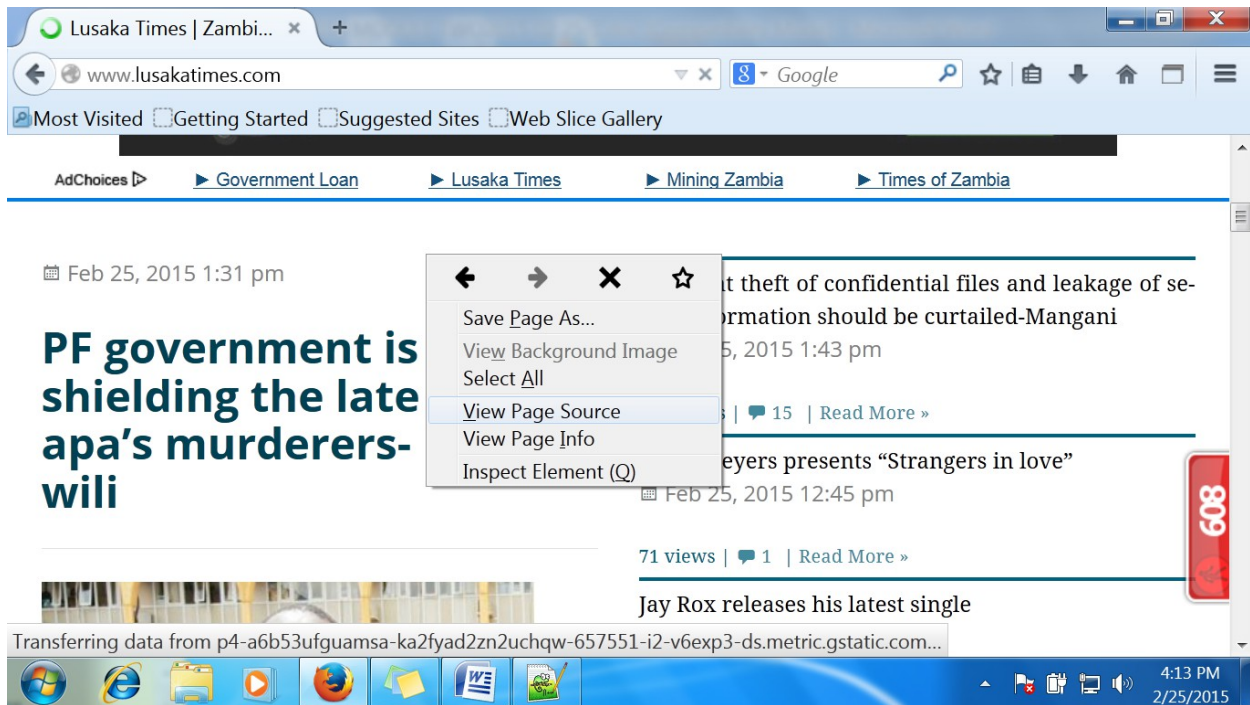
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Contents here.....

</body>

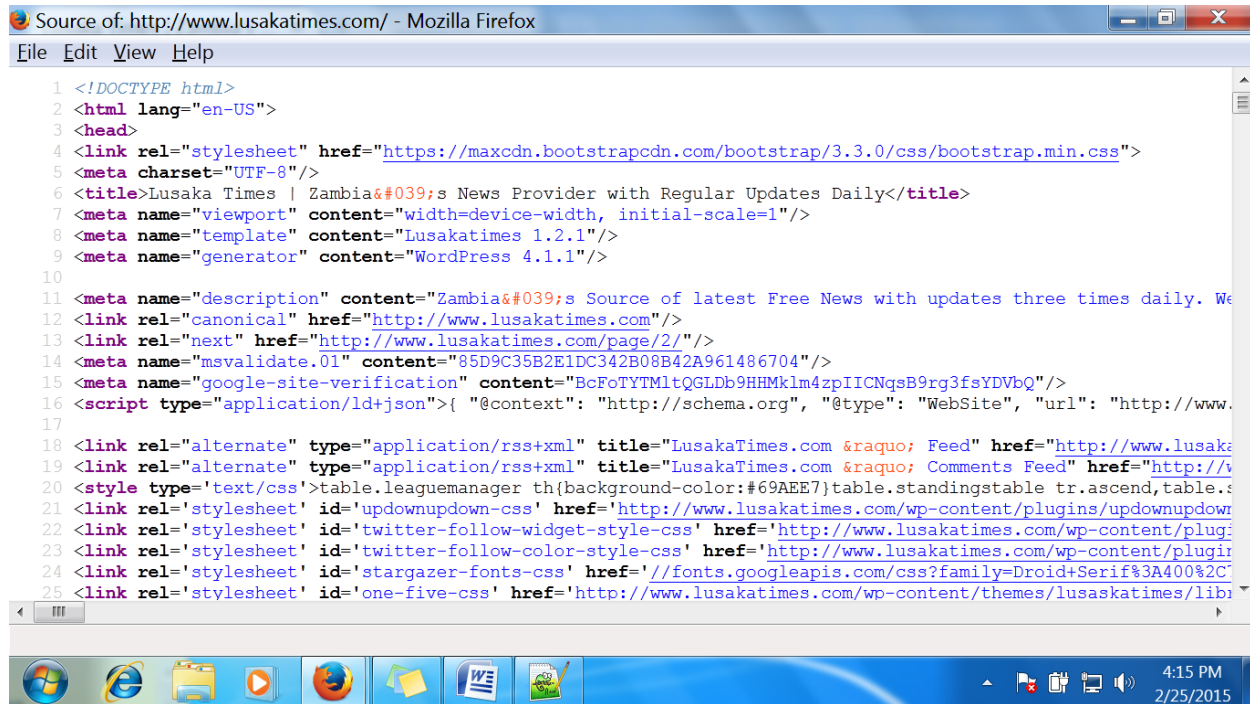
</html>

Many students have asked me on several occasions on whether or not to master or memorize the document declaration statement and the other components of the web page structure. My answer has been **Yes** and **No**. Yes in the sense that knowing this structure by heart is the best thing one can do. No in the sense that one can copy the web page structure from any web page and customize it meet her or his needs. To do that, just go to any web page, **right click** it and choose **View Page Source**.



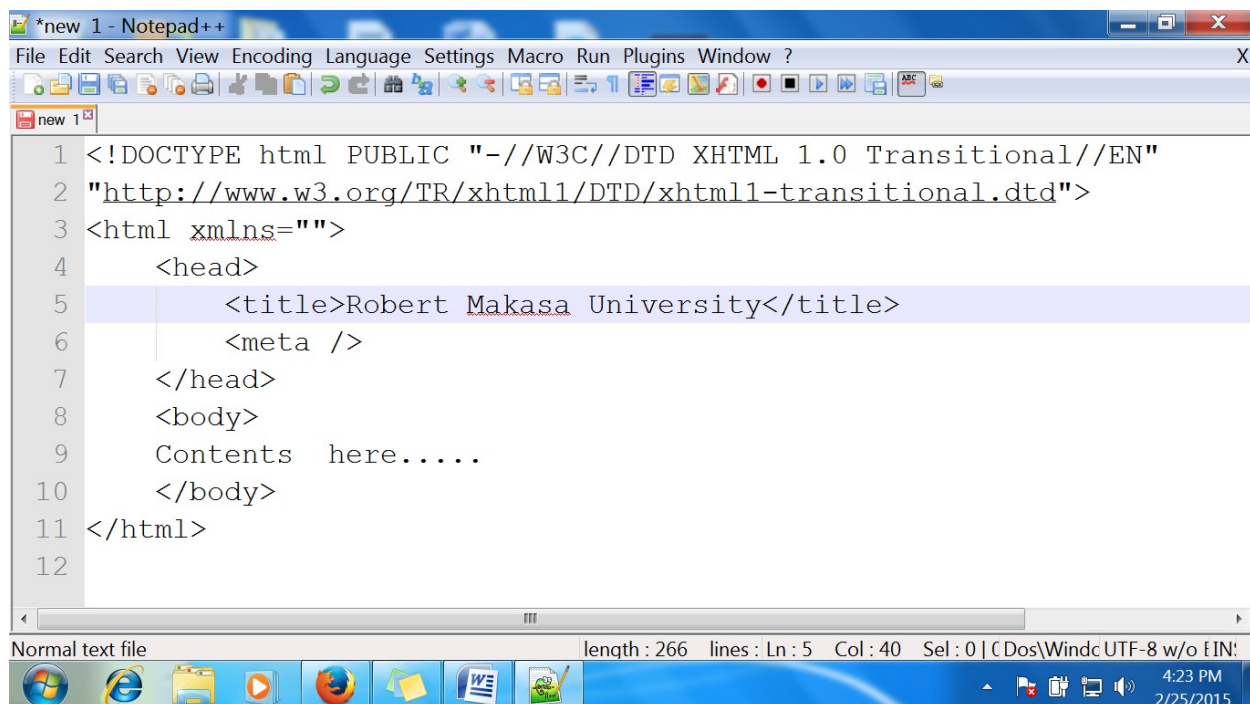
This act will lead to the source code of that website. You can copy that source code and delete the unnecessary tags and remain with the basic codes to create the basic web page structure.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
Source of: http://www.lusakatimes.com/ - Mozilla Firefox
File Edit View Help
1 <!DOCTYPE html>
2 <html lang="en-US">
3 <head>
4 <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/css/bootstrap.min.css">
5 <meta charset="UTF-8"/>
6 <title>Lusaka Times | Zambia&#039;s News Provider with Regular Updates Daily</title>
7 <meta name="viewport" content="width=device-width, initial-scale=1"/>
8 <meta name="template" content="Lusakatimes 1.2.1"/>
9 <meta name="generator" content="WordPress 4.1.1"/>
10
11 <meta name="description" content="Zambia&#039;s Source of latest Free News with updates three times daily. We
12 <link rel="canonical" href="http://www.lusakatimes.com"/>
13 <link rel="next" href="http://www.lusakatimes.com/page/2/">
14 <meta name="msvalidate.01" content="85D9C35B2E1DC342B08B42A961486704"/>
15 <meta name="google-site-verification" content="BcFoTYTmltQGLDb9HHMklm4zpIICNqsB9rg3fsYDVbQ"/>
16 <script type="application/ld+json">{ "@context": "http://schema.org", "@type": "WebSite", "url": "http://www.
17
18 <link rel="alternate" type="application/rss+xml" title="LusakaTimes.com &raquo; Feed" href="http://www.lusaka
19 <link rel="alternate" type="application/rss+xml" title="LusakaTimes.com &raquo; Comments Feed" href="http://v
20 <style type="text/css">table.leaguemanager th{background-color:#69AEE7}table.standingstable tr.ascend,table.s
21 <link rel="stylesheet" id="updownupdown-css" href="http://www.lusakatimes.com/wp-content/plugins/updownupdown
22 <link rel="stylesheet" id="twitter-follow-widget-style-css" href="http://www.lusakatimes.com/wp-content/plug
23 <link rel="stylesheet" id="twitter-follow-color-style-css" href="http://www.lusakatimes.com/wp-content/plugir
24 <link rel="stylesheet" id="stargazer-fonts-css" href="//fonts.googleapis.com/css?family=Droid+Serif%3A400%2C
25 <link rel="stylesheet" id="one-five-css" href="http://www.lusakatimes.com/wp-content/themes/lusakatimes/lib
```

However, for you LIS 3010 students, you need to know this structure by heart as it will help in you in many ways. Whatever means you will use to create the web page structure, you may end up with something shown below.

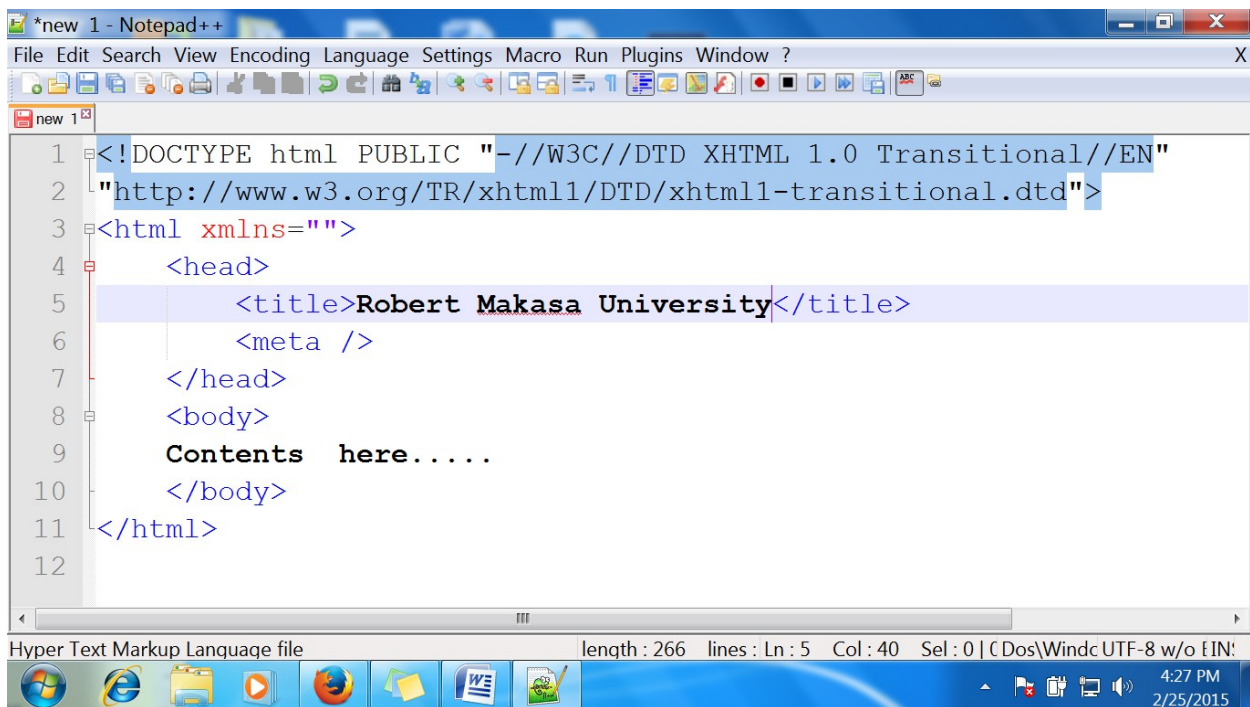


```
*new 1 - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4 <head>
5 <title>Robert Makasa University</title>
6 <meta />
7 </head>
8 <body>
9 Contents here.....
10 </body>
11 </html>
12
Normal text file length: 266 lines: Ln: 5 Col: 40 Sel: 0 | C:\Dos\Windc UTF-8 w/o BOM
4:23 PM 2/25/2015
```

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

d) Saving and running the web page

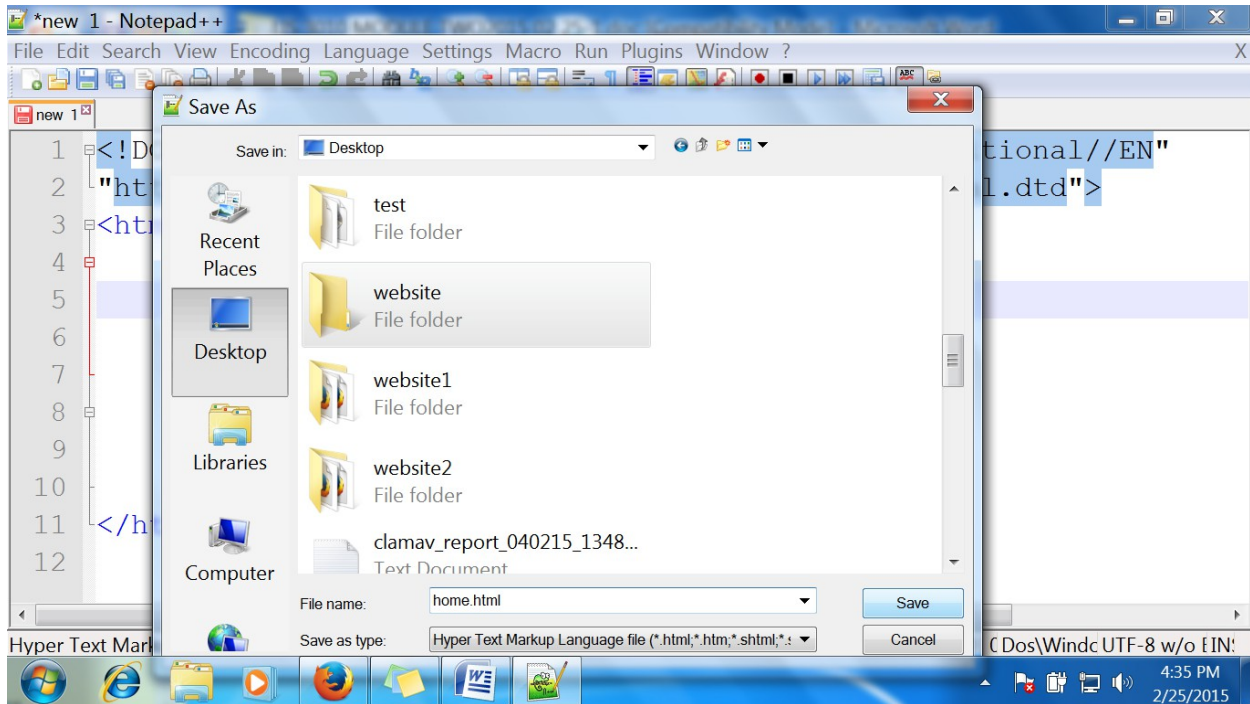
To save the web page structure, beginning by changing the language to HTML. Go on **Language** icon in your notepad++ and choose **H** and thereafter click on **HTML**. Once you do that you will see that your basic XHTML page will be colored as shown below.



```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9     Contents here.....
10  </body>
11 </html>
12
```

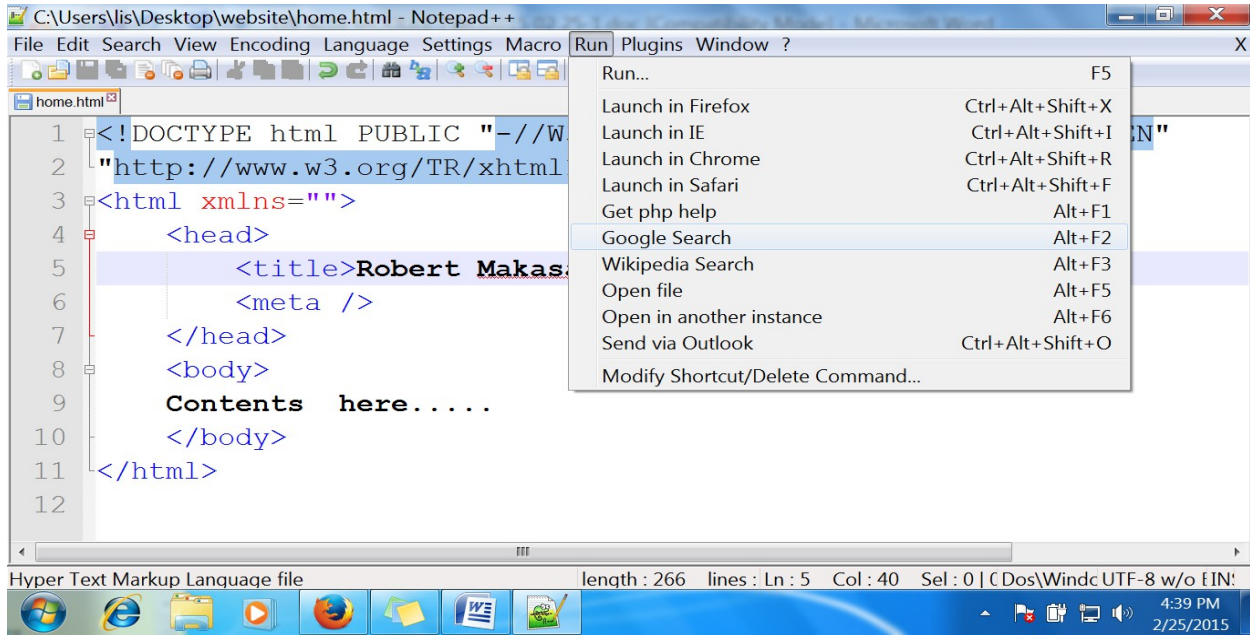
Some students may wonder why we have changed to HTML instead of XHTML? The reason is simple XHTML, HTML5 etc are all HTML languages. It distinguishes them are the tags used. Once you have changed to HTML, you are ready to save and run your web page in a browser to see what you have been writing. So let us save the above XHTML page as [home.html](#). Avoid using capital letters and spaces for your XHTML file name. Make sure to save it in the folder called **website** which we created on the Desktop. To proceed with saving, go to **file**, then click **save as** and choose **Desktop** and finally choose the folder **website** and save it from there.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



After saving, you can load the web page into your browser (internet explorer or Mozilla fire fox). To load that go on the top bar of Notepad++ and click on the icon, **run**, then choose the browser you want to use to run the code, click on that browser of your choice, it will load the web page and you will see **Robert Makasa University** and the words **contents here** in the header of your browser.

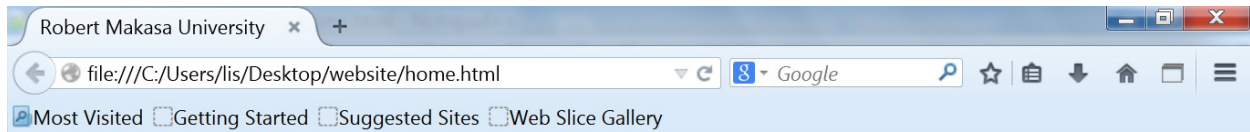
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



The screenshot shows the Notepad++ editor with a file named 'home.html' open. The code is as follows:

```
1 <!DOCTYPE html PUBLIC "-//W
2 "http://www.w3.org/TR/xhtml
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa
6     <meta />
7   </head>
8   <body>
9     Contents here.....
10  </body>
11 </html>
12
```

A context menu is open over the code, listing various actions such as 'Launch in Firefox', 'Launch in IE', 'Launch in Chrome', 'Launch in Safari', 'Get php help', 'Google Search', 'Wikipedia Search', 'Open file', 'Open in another instance', 'Send via Outlook', and 'Modify Shortcut/Delete Command...'. The status bar at the bottom indicates the file is a 'Hyper Text Markup Language file' with a length of 266, 5 lines, and 40 columns. The system tray shows the time as 4:39 PM on 2/25/2015.



Contents here.....



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Unit 3: Creation of a web page using various XHTML tags

Introduction

Unit 3 demonstrates to you on how to use various XHTML tags to create web page. This unit begins by showing you how to use the heading tags to create headings in your web page. It further shows you how to use various formatting XHTML tags to create a presentable web page. Tags to be learn in this unit include horizontal line, mark, list, image, break, and paragraph and italic tags.

Aims

This unit aims at demonstrating how to use various XHTML tags in creating a web page.

Objectives

After the end of this unit, you should be able to do the following:

- Use the heading tags to create headings
- Use the paragraph and break tags to create paragraphs and breaks
- Insert the image into a web page using the image tag
- Create three types of lists using the list tags
- Use other various XHTML formatting tags to create a web page.

Resources

You need a computer which should have at least two web browsers installed on it (*Internet explorer* and *Fire Fox*). It should also have a web editor called Note pad+++. Check if your computer has the above mentioned tools. If does not have, download and install them on your computer.

Addition Resources

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

You need books and other information resources that deal with website designing using XHTML.

Below are some of the books that can supplement this module:

7. Castro, E (2003). *HTML for the World Wide Web: with XHTML and CSS*. 5th Ed. Berkeley: Pearson Education
8. Deitel.P.J and Deitel.H.M (2009). *Internet & World Wide Web: How to Program*. New York: Pearson Educational International
9. Deitel.P.J and Deitel.H.M (2003). *C++: How to Program*. 4th Ed. New York: Pearson Educational International
10. Lavanya, L (2011). *HTML 5: Magic wand for Web Designing*. Chennai: Ane Books Pvt Ltd.
11. Musciano,C and Kennedy, B (20007). *HTML & XHTML: The Definitive Guide*. Chennai: Shroff Publishers & Distributors PVT.LTD
12. Schultz, D and Cook, C (2007). *Beginning HTML with CSS and XHTML: Modern Guide and Reference*. New York: Press



Time Frame

You need **two** weeks to finish this unit.

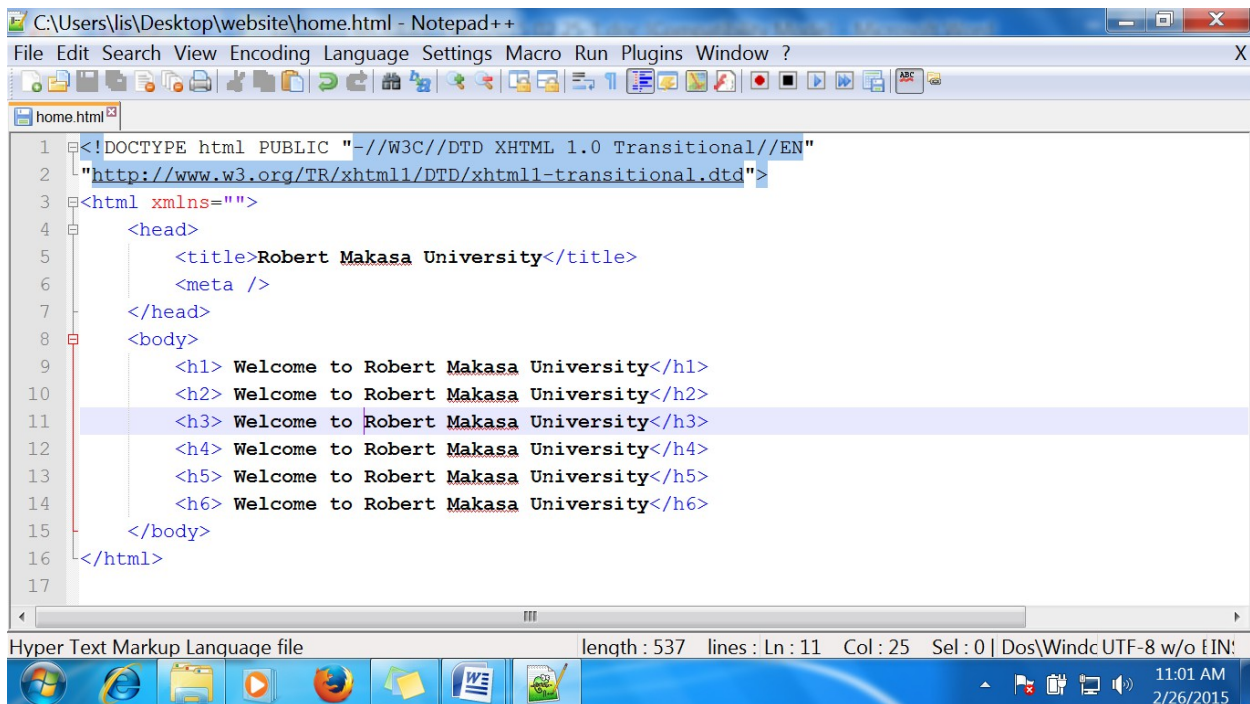
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

3.1 Introduction to various XHTML formatting tags

As already alluded to in the introduction, web page design involves the use of XHTML tags. In other words, we create the contents of a web page using XHTML tags. These tags are specialized as they are used to accomplish one goal. For example, if one wants to insert an image into the web page, he/she will use the image tag ``. There are many XHTML tags approved by the W3C to use in web page design. These include the following:

i. Heading tag

You may acknowledge the fact that many a times we use headings in our writings. Similarly, we use headings in our web pages. The tag is `<h> </h>`; it is a paired tag. There are six types of headings that you can create in XHTML. This heading tag uses numbers; from 1-6. The h1 heading is bigger than h2 and the least in terms of size is h6. Therefore, depending on how big you want the heading to be, you can use the appropriate number. Let us try to use these heading tags.

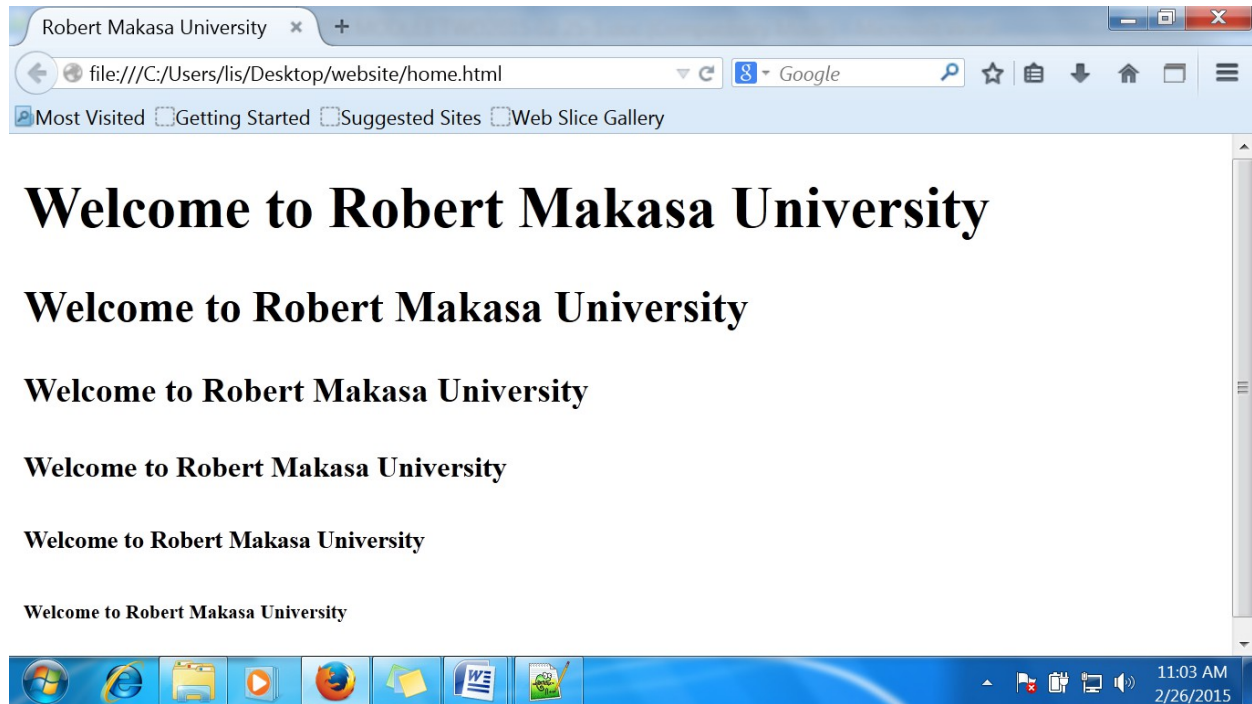


```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9     <h1>Welcome to Robert Makasa University</h1>
10    <h2>Welcome to Robert Makasa University</h2>
11    <h3>Welcome to Robert Makasa University</h3>
12    <h4>Welcome to Robert Makasa University</h4>
13    <h5>Welcome to Robert Makasa University</h5>
14    <h6>Welcome to Robert Makasa University</h6>
15  </body>
16 </html>
17
```

Hyper Text Markup Language file length: 537 lines: Ln: 11 Col: 25 Sel: 0 | Dos\Windc UTF-8 w/o tIN: 11:01 AM 2/26/2015

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Once you save and run, you will see the heading “Welcome to Robert Makasa University” being displayed differently depending of the heading tag used.

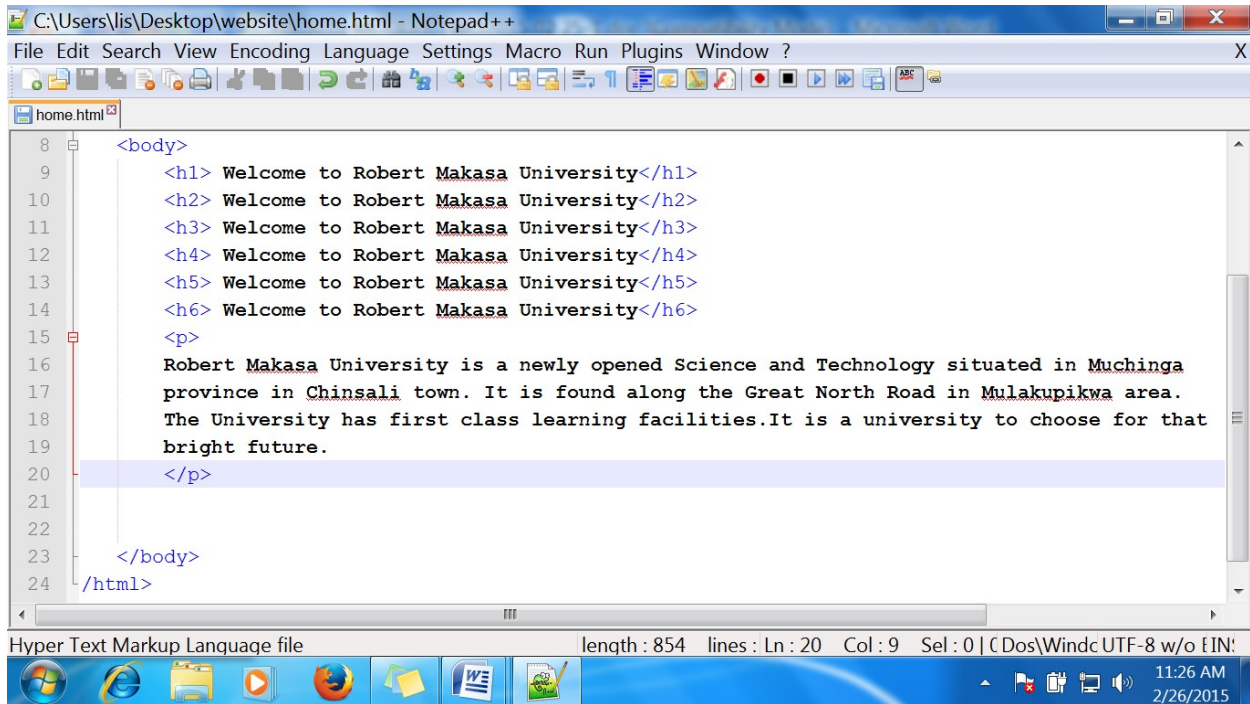


You have seen the different headings but we do not need to use all the six headings to achieve one thing. Just use one heading that will meet your needs.

ii. Paragraph tag

For you want to create a paragraph, you need to use a paragraph tag `<p>`. It is a paired tag. You put the text between the opening and closing tag. Can we use it now? Get some text written in **word** and put between the paragraph tags.

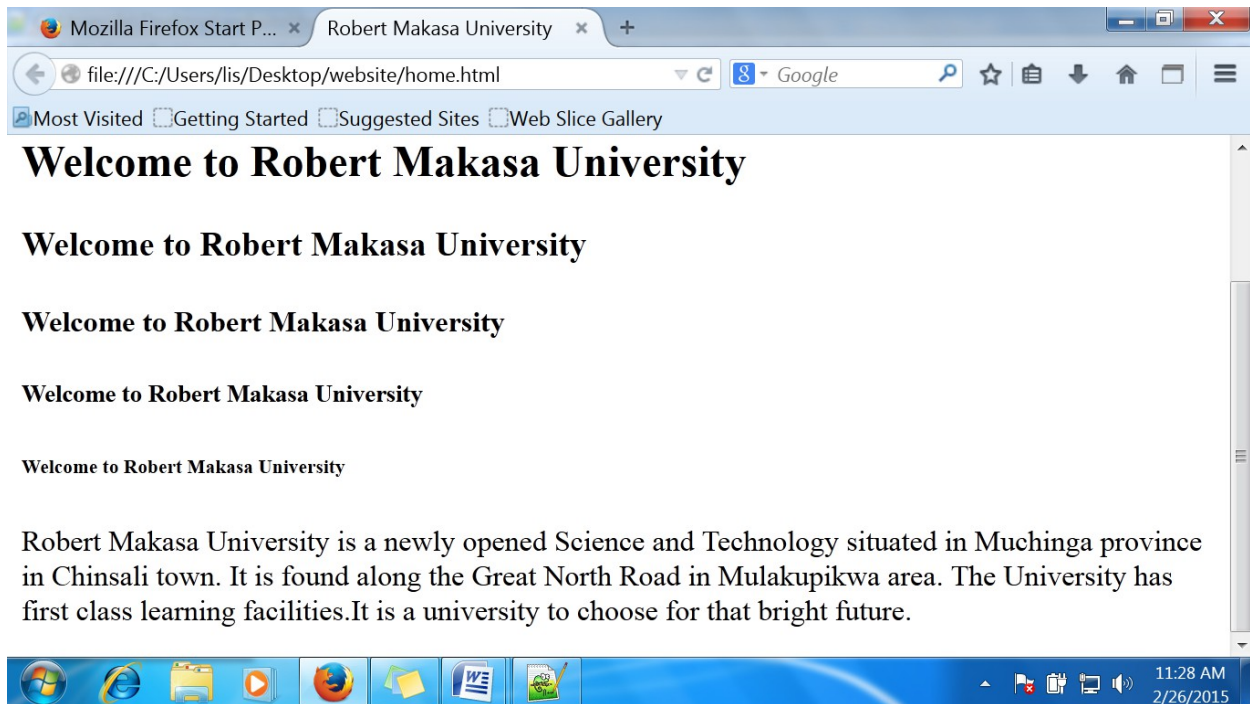
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
8 <body>
9   <h1> Welcome to Robert Makasa University</h1>
10  <h2> Welcome to Robert Makasa University</h2>
11  <h3> Welcome to Robert Makasa University</h3>
12  <h4> Welcome to Robert Makasa University</h4>
13  <h5> Welcome to Robert Makasa University</h5>
14  <h6> Welcome to Robert Makasa University</h6>
15  <p>
16  Robert Makasa University is a newly opened Science and Technology situated in Muchinga
17  province in Chinsali town. It is found along the Great North Road in Mulakupikwa area.
18  The University has first class learning facilities.It is a university to choose for that
19  bright future.
20  </p>
21
22
23 </body>
24 /html>
```

Hyper Text Markup Language file length : 854 lines : Ln : 20 Col : 9 Sel : 0 | C:\Dos\Windc UTF-8 w/o BOM

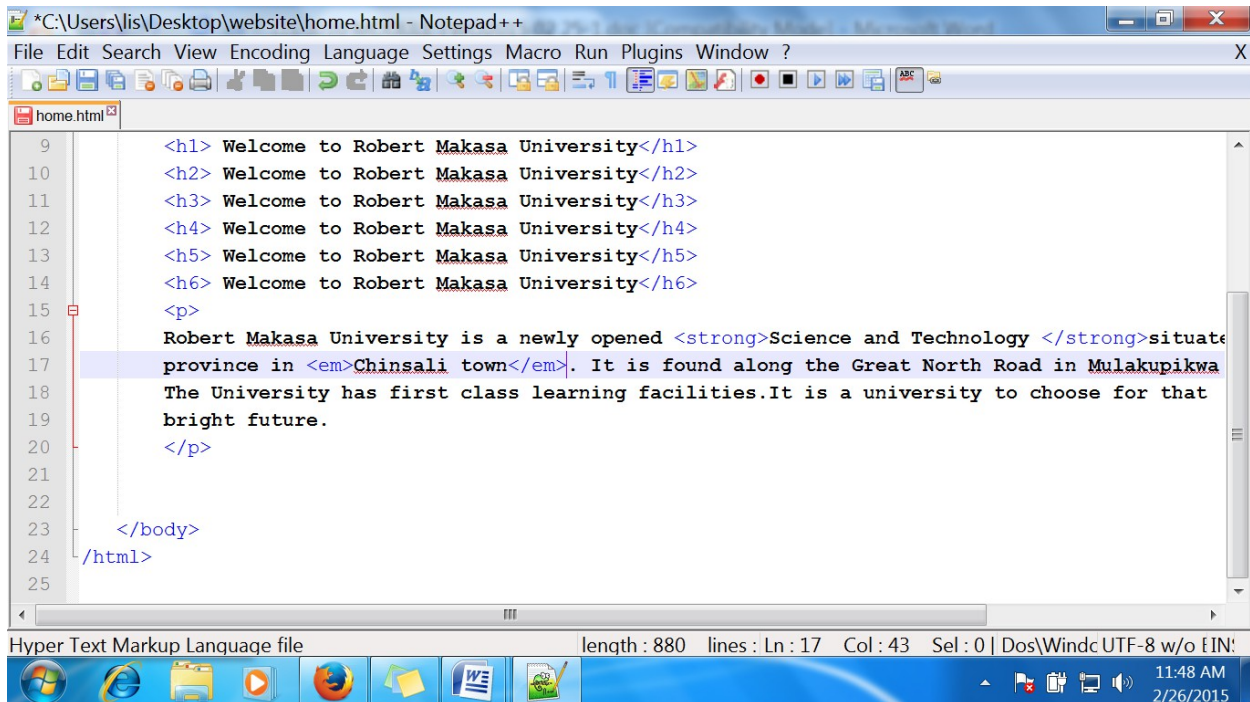
Once we save and run, you will see the results.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

iii. Strong, and emphasis tags

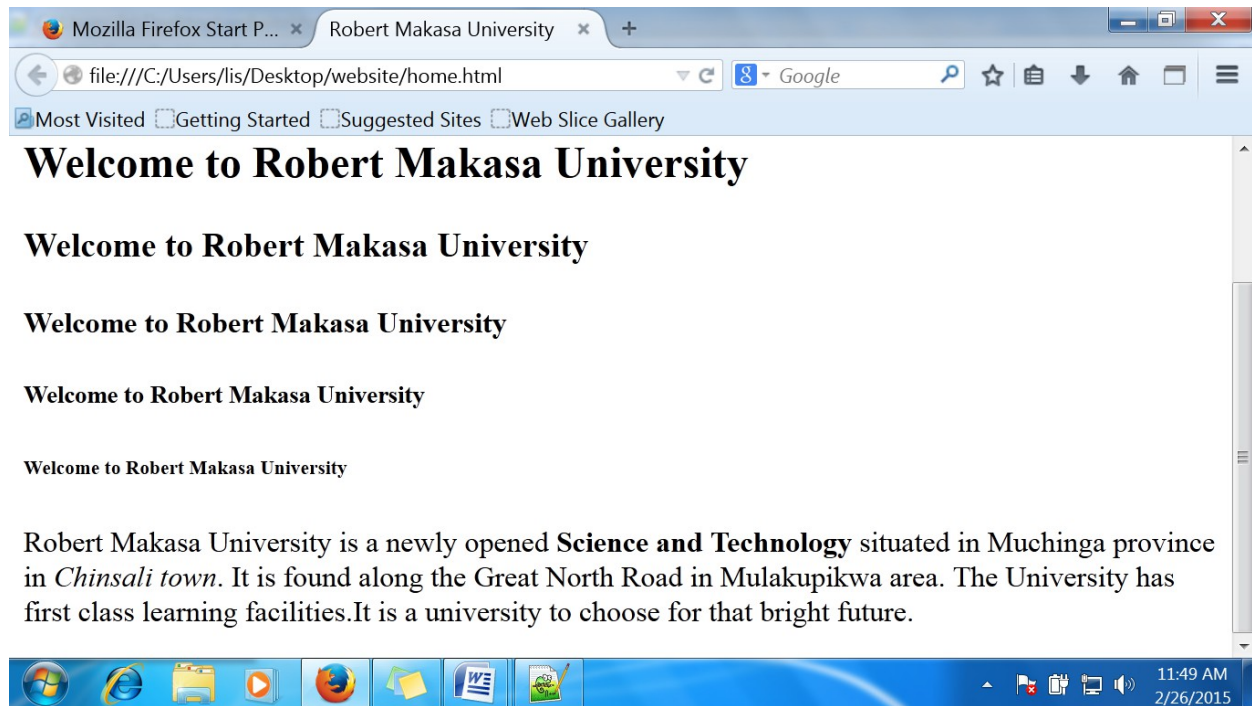
When you need to make some text to be in bold, you use the strong tag ``. It is a paired tag too. If you need to emphasize some portions of the text, use the emphasis tag ``. Nest the text that you to emphasize between the emphasis tags and apply the same to the strong tag as shown below.



```
*C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
9 <h1> Welcome to Robert Makasa University</h1>
10 <h2> Welcome to Robert Makasa University</h2>
11 <h3> Welcome to Robert Makasa University</h3>
12 <h4> Welcome to Robert Makasa University</h4>
13 <h5> Welcome to Robert Makasa University</h5>
14 <h6> Welcome to Robert Makasa University</h6>
15 <p>
16 Robert Makasa University is a newly opened <strong>Science and Technology </strong>situat
17 province in <em>Chinsali town</em>. It is found along the Great North Road in Mulakupikwa
18 The University has first class learning facilities.It is a university to choose for that
19 bright future.
20 </p>
21
22
23 </body>
24 </html>
25
Hyper Text Markup Language file length: 880 lines: Ln: 17 Col: 43 Sel: 0 | Dos\Windc UTF-8 w/o fIN!
11:48 AM 2/26/2015
```

Once you save and run, you will see that the words Science and Technology will be in bold and Chinsali town will be italicized (emphasized) results below.

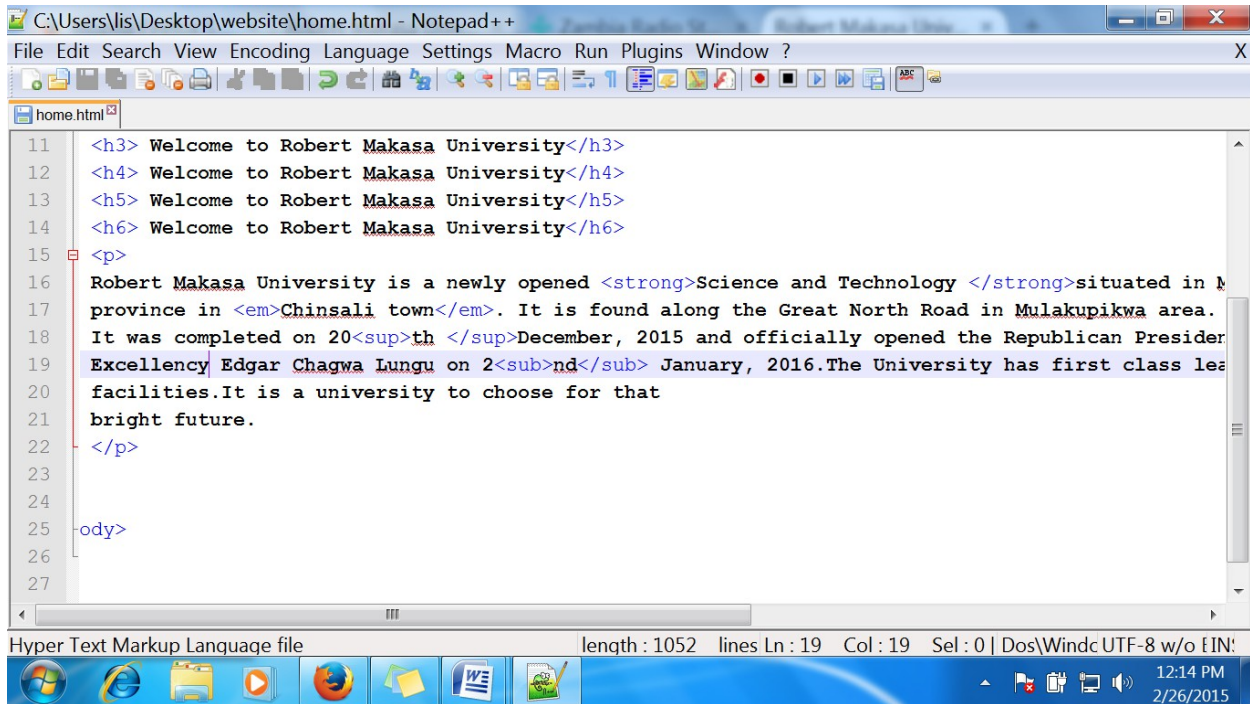
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



iv. **Superscript and Subscript tags**

Superscripts are used to make some letters or words uplifted; higher than the rest. It is handy when writing dates (24th December). On the other hand, subscripts are the direct opposite superscript. It makes some texts/words to be pushed lower. The tags are both paired tags; `` and ``.

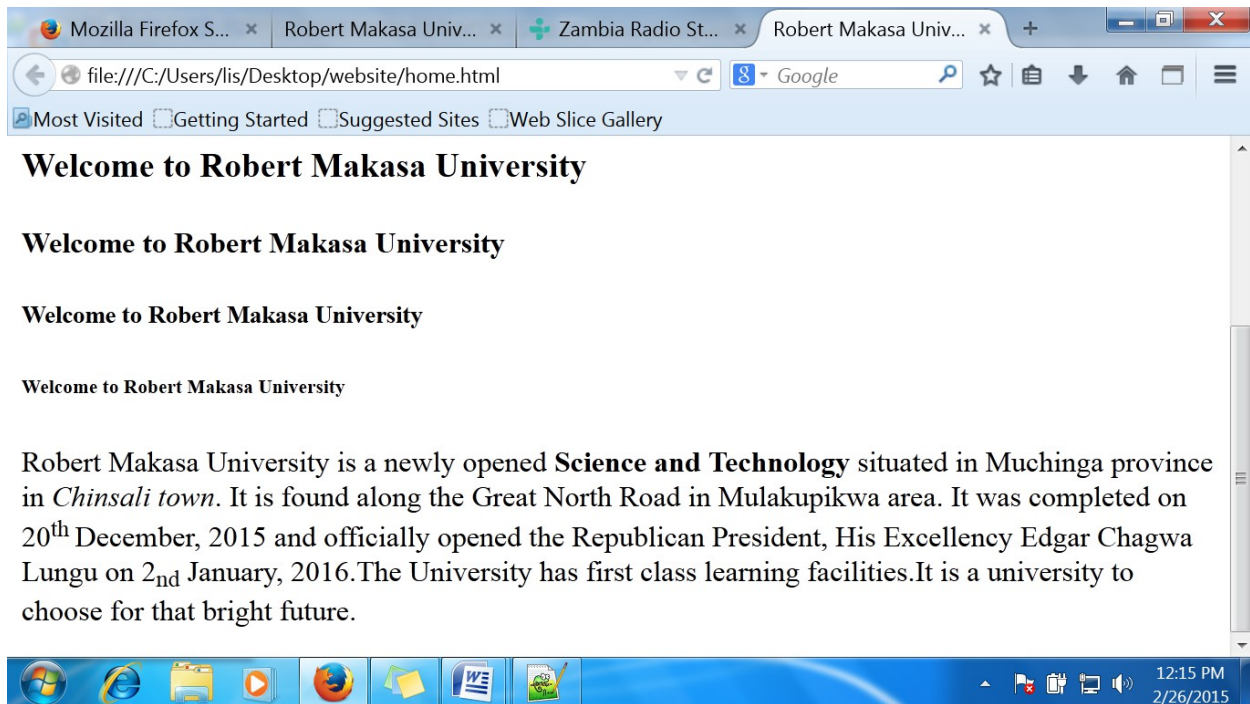
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
11 <h3> Welcome to Robert Makasa University</h3>
12 <h4> Welcome to Robert Makasa University</h4>
13 <h5> Welcome to Robert Makasa University</h5>
14 <h6> Welcome to Robert Makasa University</h6>
15 <p>
16 Robert Makasa University is a newly opened <strong>Science and Technology </strong>situated in M
17 province in <em>Chinsali town</em>. It is found along the Great North Road in Mulakupikwa area.
18 It was completed on 20<sup>th</sup>December, 2015 and officially opened the Republican President
19 Excellency Edgar Chagwa Lungu on 2<sub>nd</sub> January, 2016.The University has first class lea
20 facilities.It is a university to choose for that
21 bright future.
22 </p>
23
24
25 <body>
26
27
```

Hyper Text Markup Language file length : 1052 lines Ln : 19 Col : 19 Sel : 0 | Dos\Windc UTF-8 w/o BOM

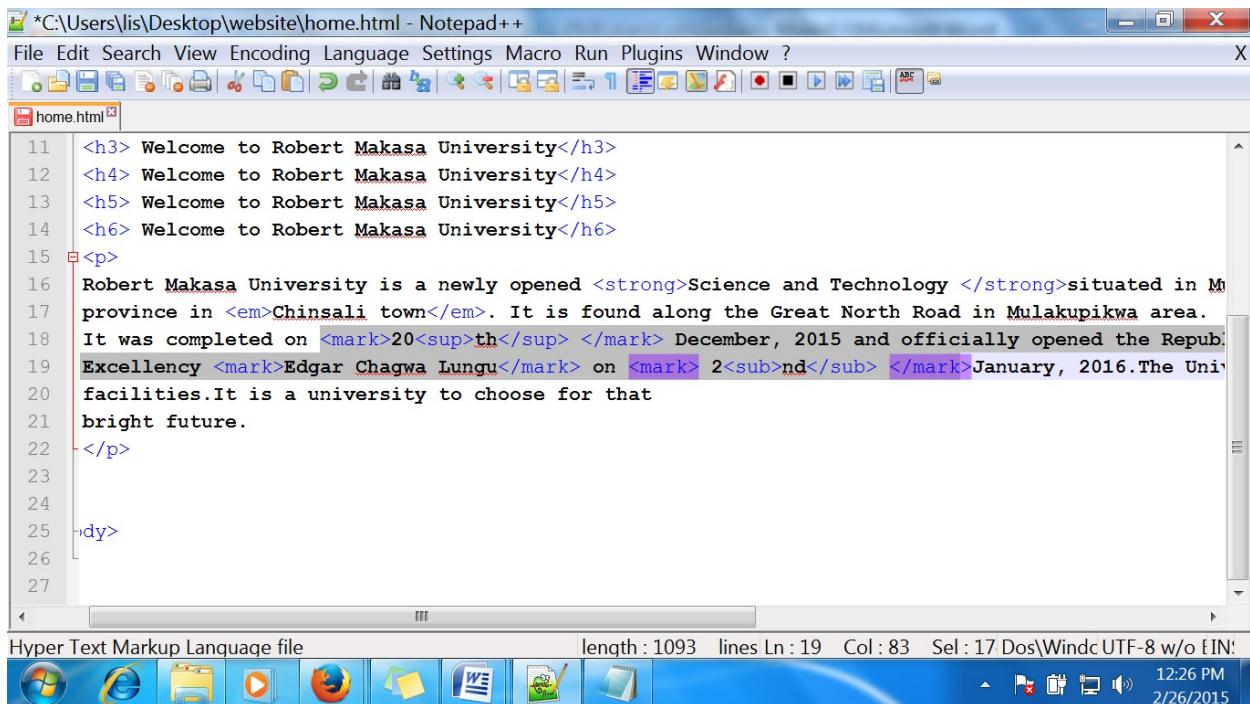
Once you save and run, you will have the following results.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

v. Highlighting tag

We can highlight certain words and letters in the text the way we highlight text in our printed text books using a highlighter. The tag is the mark tag `<mark>`. It is a paired tag too. Mark the text that you want to be highlighted. Let us try it by highlighting the president's name and the dates.



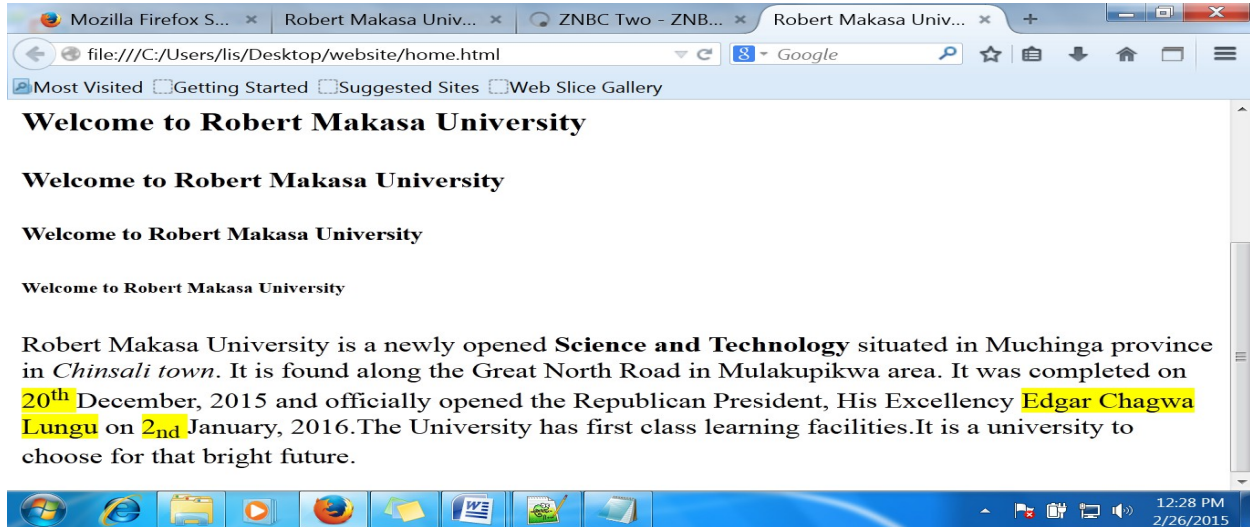
```
11 <h3> Welcome to Robert Makasa University</h3>
12 <h4> Welcome to Robert Makasa University</h4>
13 <h5> Welcome to Robert Makasa University</h5>
14 <h6> Welcome to Robert Makasa University</h6>
15 <p>
16 Robert Makasa University is a newly opened <strong>Science and Technology </strong>situated in M
17 province in <em>Chinsali town</em>. It is found along the Great North Road in Mulakupikwa area.
18 It was completed on <mark>20<sup>th</sup></mark> December, 2015 and officially opened the Repub.
19 Excellency <mark>Edgar Chagwa Lungu</mark> on <mark> 2<sub>nd</sub></mark> <mark>January, 2016.The Uni
20 facilities.It is a university to choose for that
21 bright future.
22 </p>
23
24
25 <body>
26
27
```

Hyper Text Markup Language file length: 1093 lines Ln: 19 Col: 83 Sel: 17 Dos\Windc UTF-8 w/o BOM

12:26 PM
2/26/2015

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

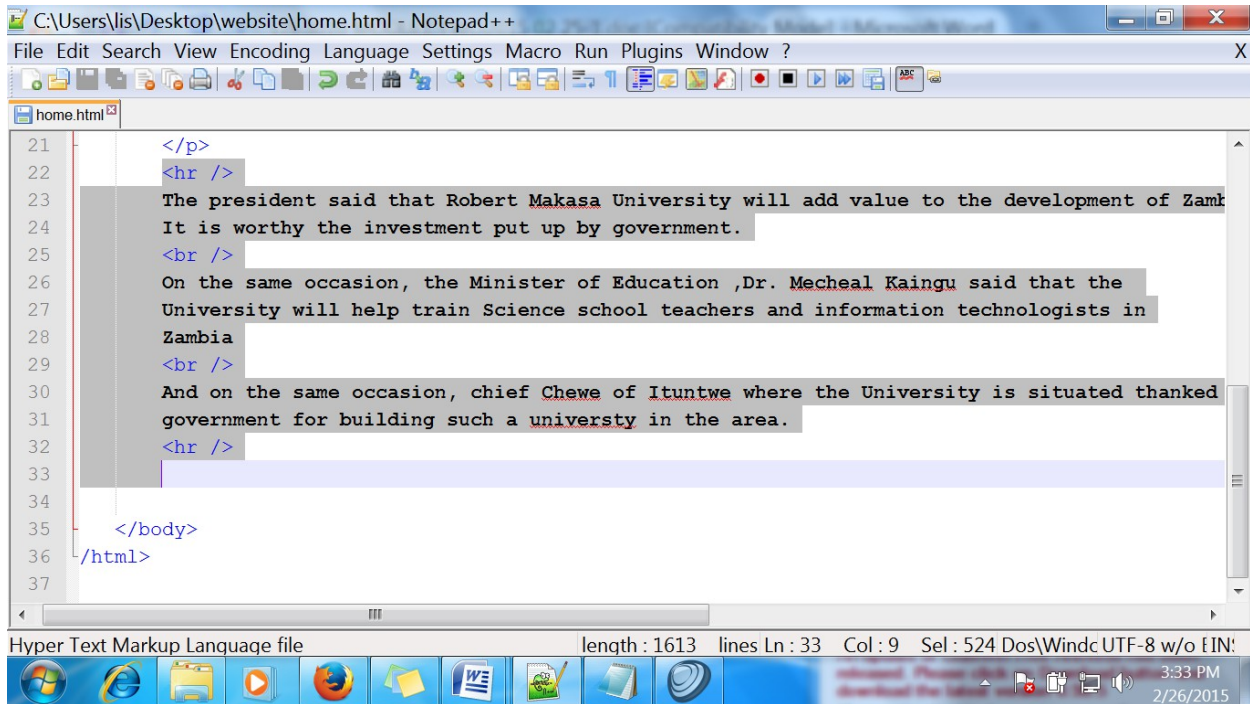
Once you mark the text, save and run, you will see the marked text highlighted as shown below.



vi. Breaks and horizontal tags

There are situations when you need to create breaks between portions of the text; create breaks similar to paragraphs. You need to use the break tag `
`. Put the break tag where you want to create the break. Further, for drawing horizontal line, you use the horizontal tag `<hr />`. For the horizontal line, you can even specify the width, and color of the line by introducing the attributes and their values as you will see in the example below. **Note** that both the break and horizontal tags are stand alone tags.

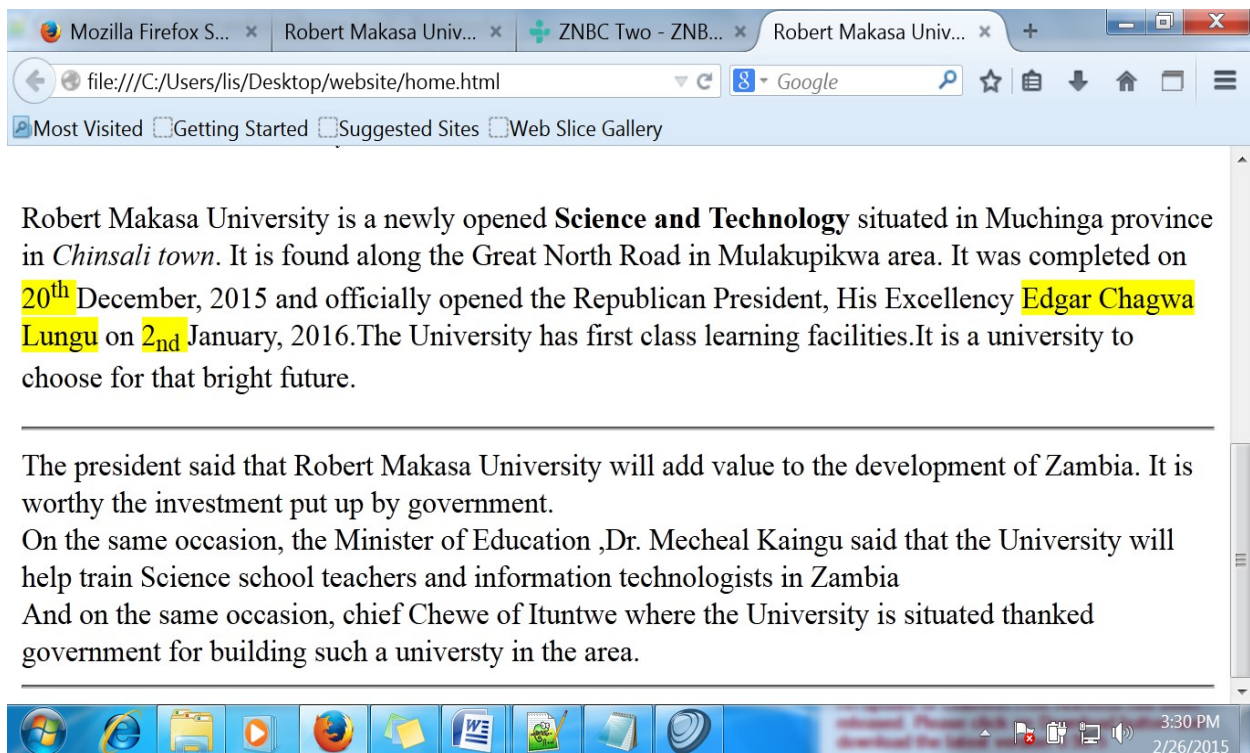
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
21 </p>
22 <hr />
23 The president said that Robert Makasa University will add value to the development of Zam
24 It is worthy the investment put up by government.
25 <br />
26 On the same occasion, the Minister of Education ,Dr. Mecheal Kaingu said that the
27 University will help train Science school teachers and information technologists in
28 Zambia
29 <br />
30 And on the same occasion, chief Chewe of Ituntwe where the University is situated thanked
31 government for building such a universty in the area.
32 <hr />
33
34
35 </body>
36 </html>
37
```

Hyper Text Markup Language file length : 1613 lines Ln : 33 Col : 9 Sel : 524 Dos\Windc UTF-8 w/o BOM 3:33 PM 2/26/2015

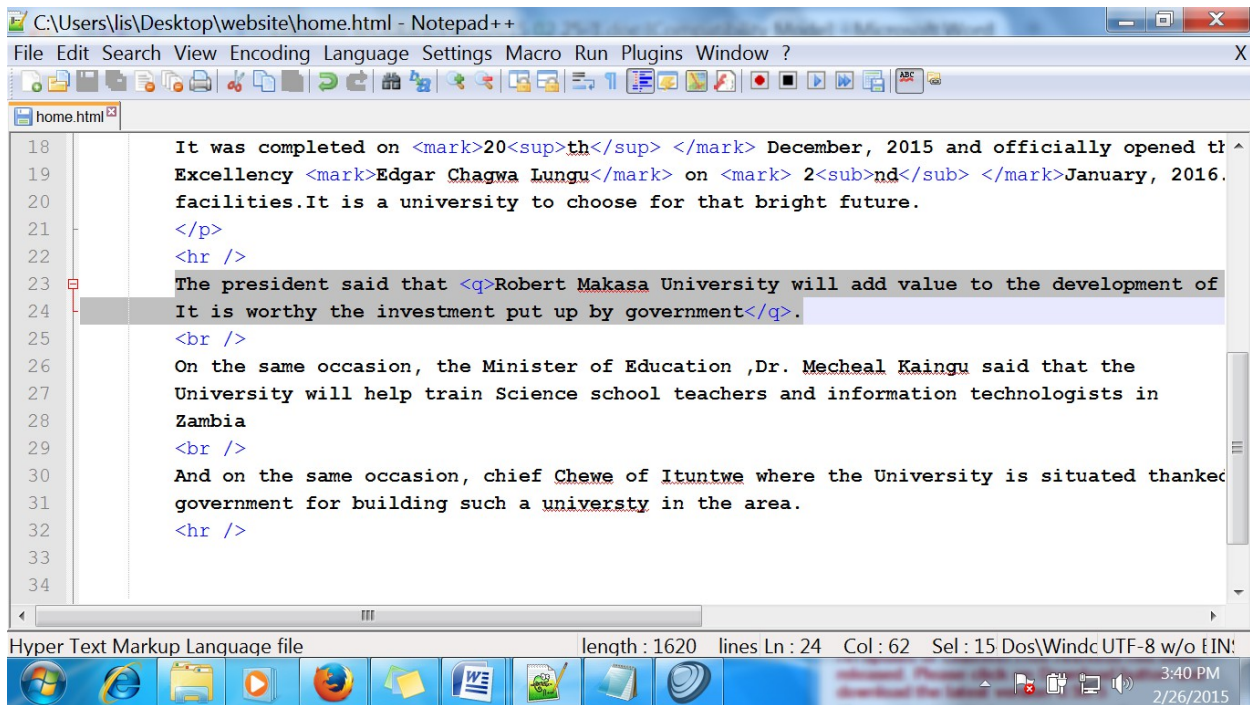
Once you save and run your html page, you will see some breaks between text created and the horizontal line drawn as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

vii. Quotation tags

You may need to quote certain portions of the text. For you to do that, you need to use the quotation tag `<q>` `</q>`. You need to nest the text that you want to quote in the quotation tags. For instance, we want to quote what the president said, you can just nest those words in the quotation tag as shown below.

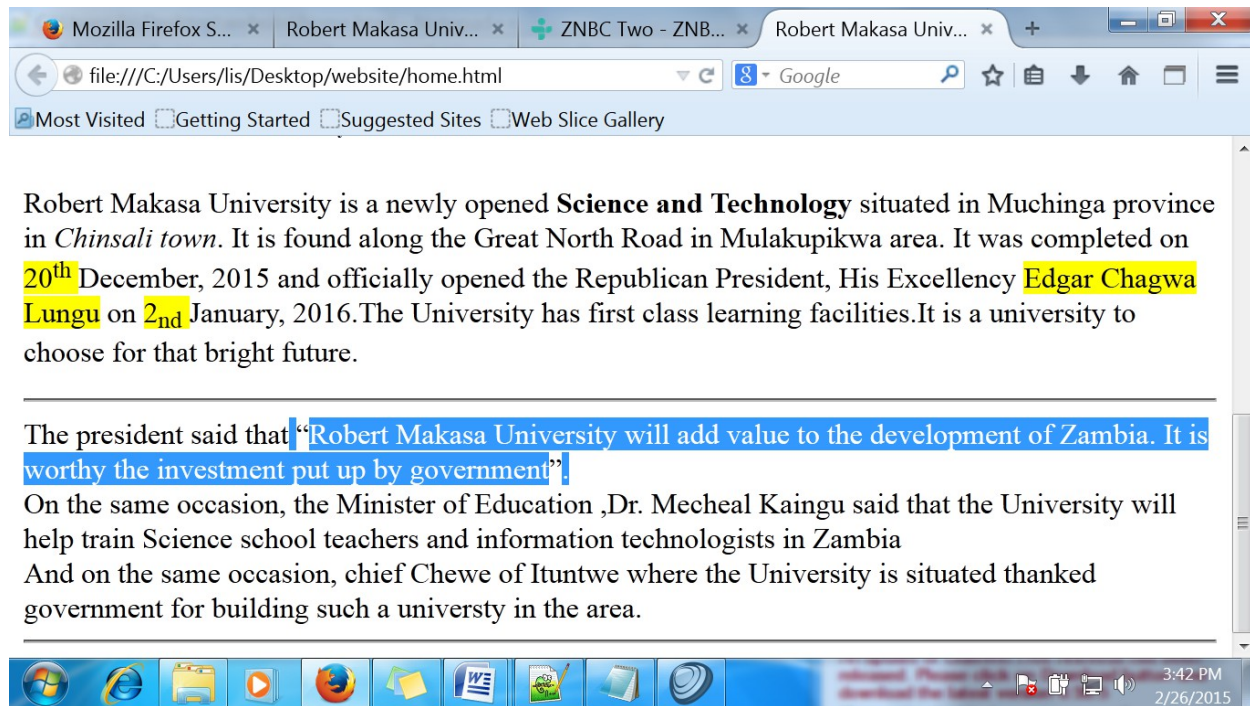


```
18 It was completed on <mark>20<sup>th</sup> </mark> December, 2015 and officially opened th  
19 Excellency <mark>Edgar Chagwa Lungu</mark> on <mark> 2<sub>nd</sub> </mark>January, 2016.  
20 facilities.It is a university to choose for that bright future.  
21 </p>  
22 <hr />  
23 The president said that <q>Robert Makasa University will add value to the development of  
24 It is worthy the investment put up by government</q>.  
25 <br />  
26 On the same occasion, the Minister of Education ,Dr. Mecheal Kaingu said that the  
27 University will help train Science school teachers and information technologists in  
28 Zambia  
29 <br />  
30 And on the same occasion, chief Chewe of Ituntwe where the University is situated thanked  
31 government for building such a universty in the area.  
32 <hr />  
33  
34
```

Hyper Text Markup Language file length : 1620 lines Ln : 24 Col : 62 Sel : 15 Dos\Windc UTF-8 w/o BOM
3:40 PM 2/26/2015

Once you save and run, you will see the words of the president quoted as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



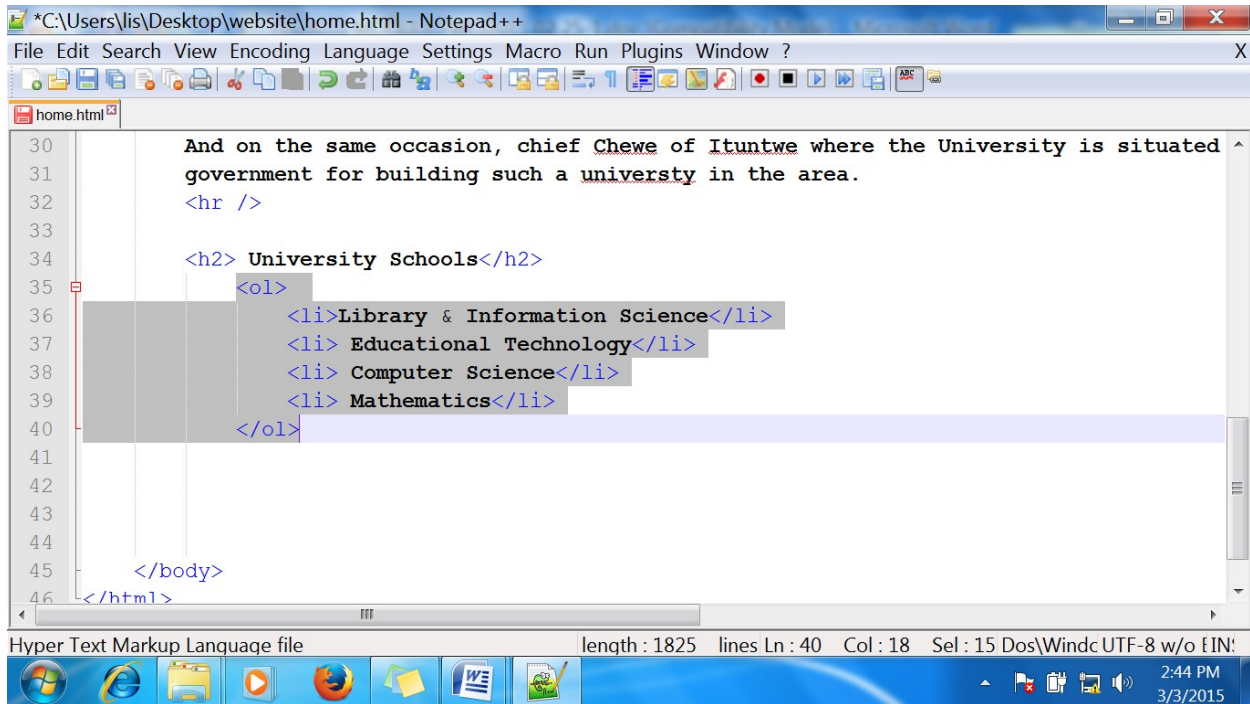
viii. Lists

You may need to list some items in your website like we do in Microsoft Office. The lists tags will help you to do that. There are **three** list tags; namely **order**, **unordered** and **definition list**.

☐☐ **Ordered lists**

As the name suggests, ordered lists use some ordering system to list the items. In ordered lists, items could be listed using both Arabic and Roman numbers. Also alphabetical letters such as ABCD are use. The ordered list tag is `` which is a paired tag. The actual lists with the `` tag are then nested in the ordered list tags as shown below.

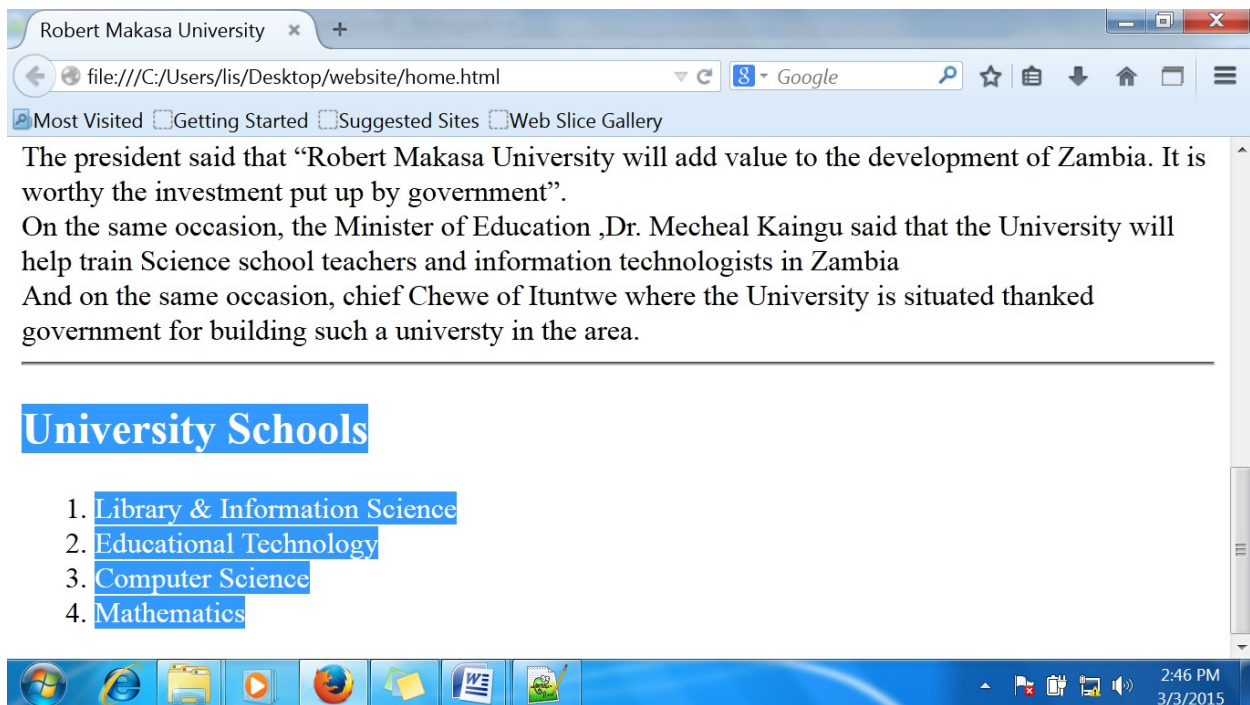
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
30 And on the same occasion, chief Chewe of Ituntwe where the University is situated
31 government for building such a universty in the area.
32 <hr />
33
34 <h2> University Schools</h2>
35 <ol>
36 <li>Library & Information Science</li>
37 <li> Educational Technology</li>
38 <li> Computer Science</li>
39 <li> Mathematics</li>
40 </ol>
41
42
43
44
45 </body>
46 </html>
```

Hyper Text Markup Language file length : 1825 lines Ln : 40 Col : 18 Sel : 15 Dos\Windc UTF-8 w/o EIN: 2:44 PM 3/3/2015

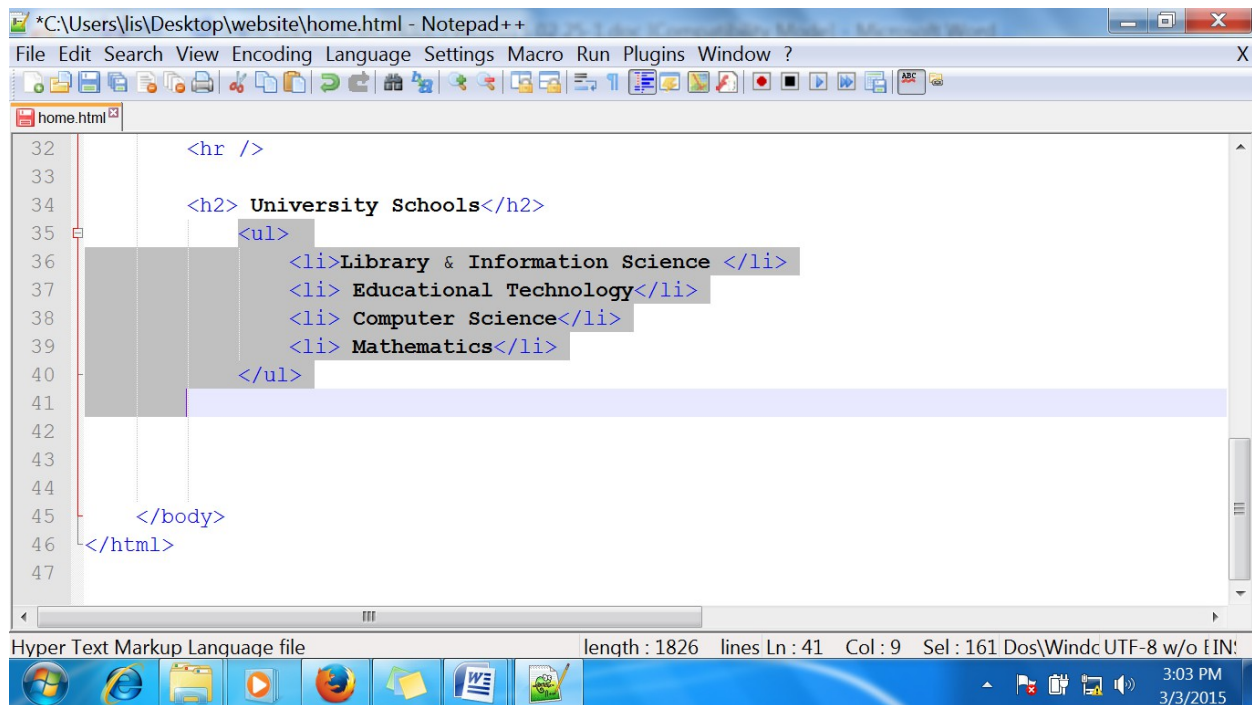
Once you save and run the lists, you see that indeed the ordered lists have been created as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

☐☐ Unordered lists

Unordered lists are direct opposite of ordered lists. No numbers or letters are used. These types of lists are used when create lists of items that do not need to be put in an order of importance. Therefore use this when create lists of goods, departments etc. The tag for the unordered tag is the ``. It is also a paired tag. Like we did in the ordered tags, the actual lists should be nested in the unordered list tags as shown below.



```
32 <hr />
33
34 <h2> University Schools</h2>
35 <ul>
36 <li>Library & Information Science </li>
37 <li> Educational Technology</li>
38 <li> Computer Science</li>
39 <li> Mathematics</li>
40 </ul>
41
42
43
44
45 </body>
46 </html>
47
```

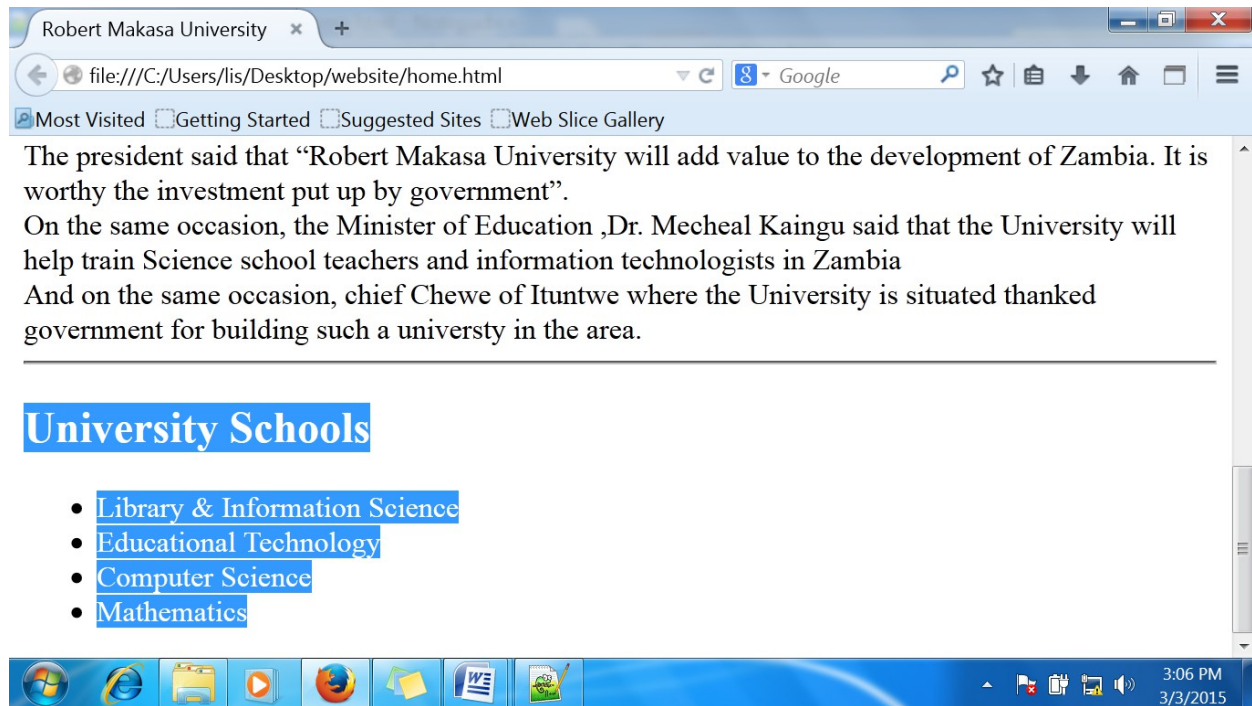
The screenshot shows a Notepad++ window with the following HTML code:

```
<hr />
<h2> University Schools</h2>
<ul>
<li>Library & Information Science </li>
<li> Educational Technology</li>
<li> Computer Science</li>
<li> Mathematics</li>
</ul>
</body>
</html>
```

The status bar at the bottom indicates: Hyper Text Markup Language file, length : 1826, lines Ln : 41, Col : 9, Sel : 161, Dos\Windc UTF-8 w/o BOM, 3:03 PM, 3/3/2015.

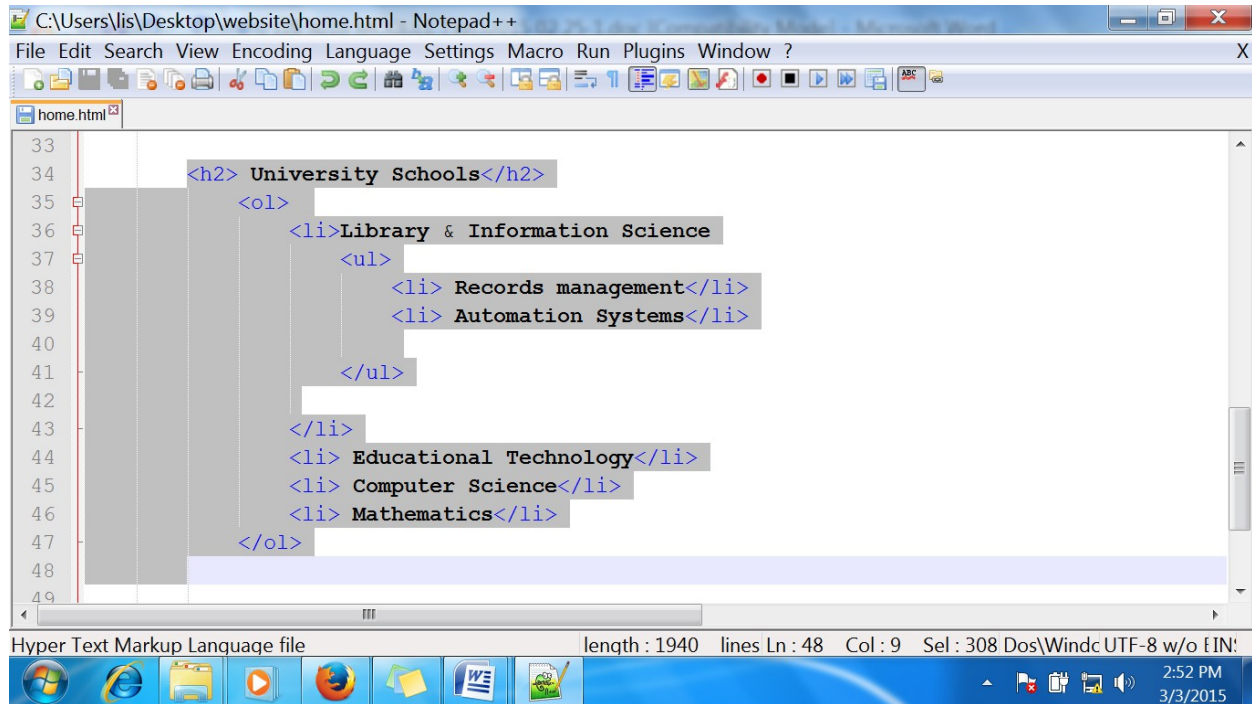
Once you save and preview, you will see the unordered list created as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Note that you can nest lists within lists. Let say, we want to create unordered lists of departments within ordered list of schools. We can put department lists within school lists as shown below.

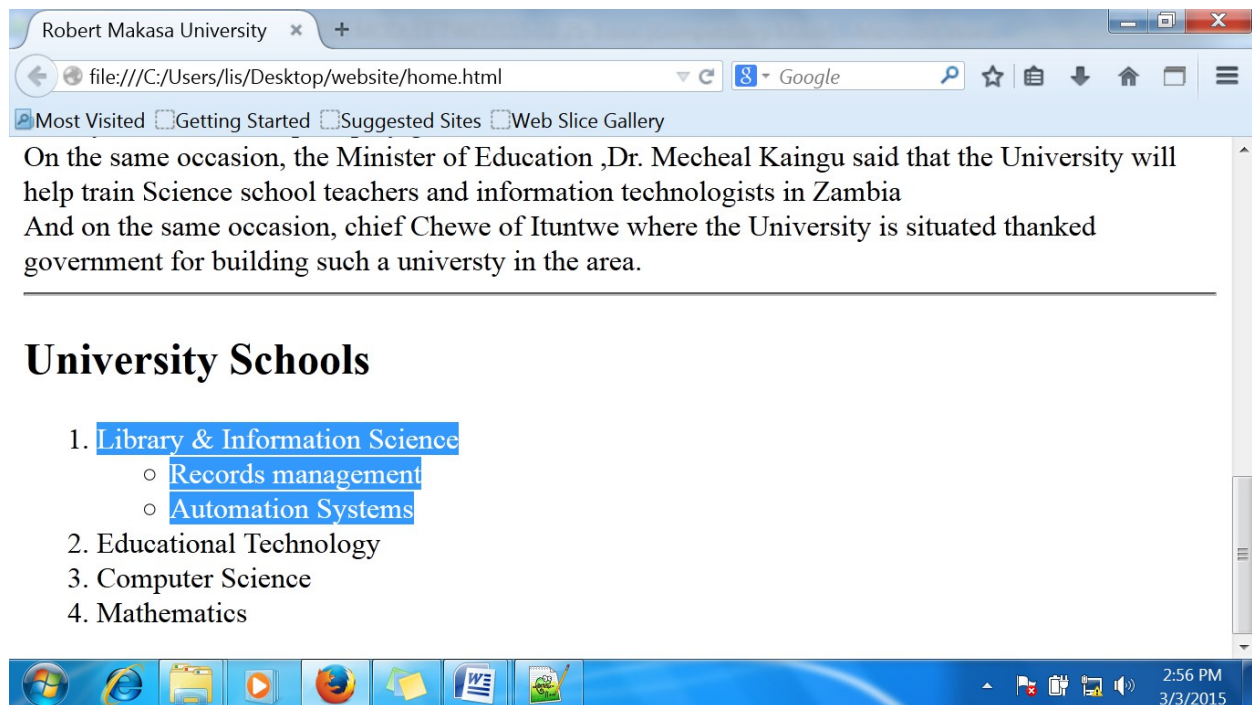
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
33
34 <h2> University Schools</h2>
35 <ol>
36 <li>Library & Information Science
37 <ul>
38 <li>Records management</li>
39 <li>Automation Systems</li>
40 </ul>
41 </li>
42 <li> Educational Technology</li>
43 <li> Computer Science</li>
44 <li> Mathematics</li>
45 </ol>
46
47
48
49
```

Hyper Text Markup Language file length : 1940 lines Ln : 48 Col : 9 Sel : 308 Dos\Windc UTF-8 w/o EIN: 2:52 PM 3/3/2015

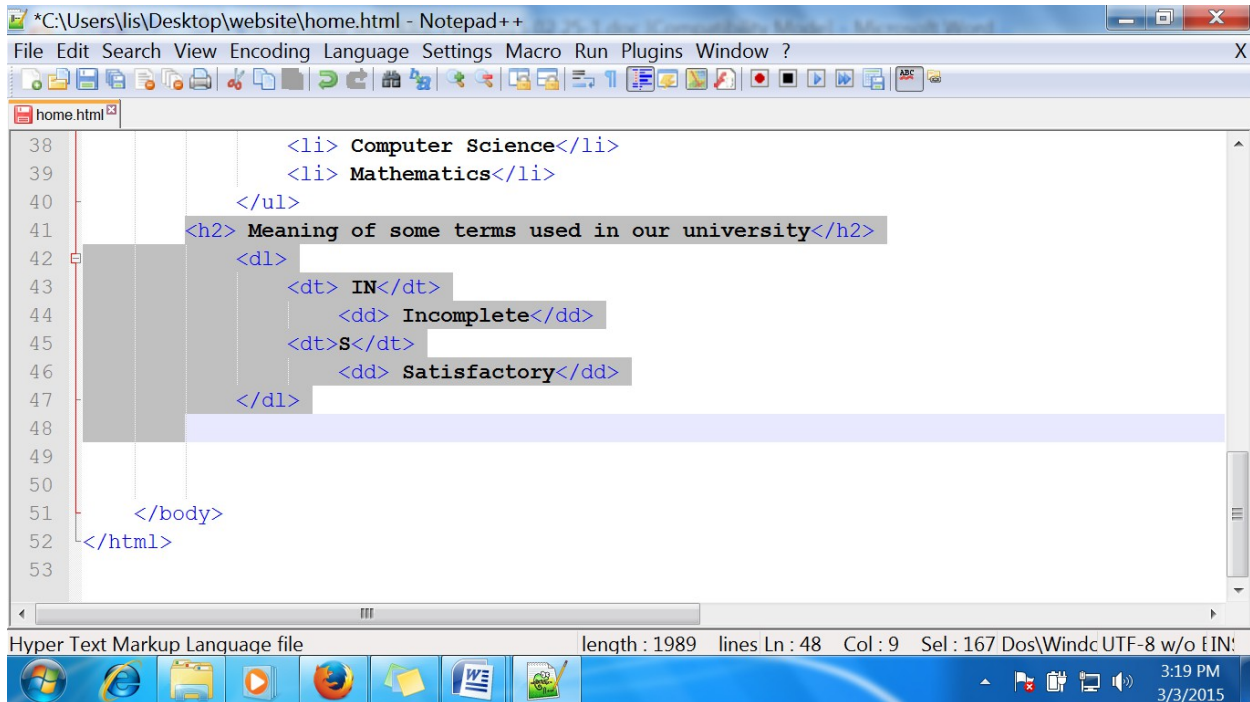
Once you save the new lists, you will for sure see that the departmental lists have been nested in the school lists as depicted below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Definition lists

As the name suggests, these are lists used when defining some terms. You declare the term to be defined first and give a definition later. The tag for the definition lists is `<dl>`. This is equally a paired tag. This tag nests other two tags; the `<dt>` which declare the term to be defined and the `<dd>` which defined the term. These two tags are also paired tags.

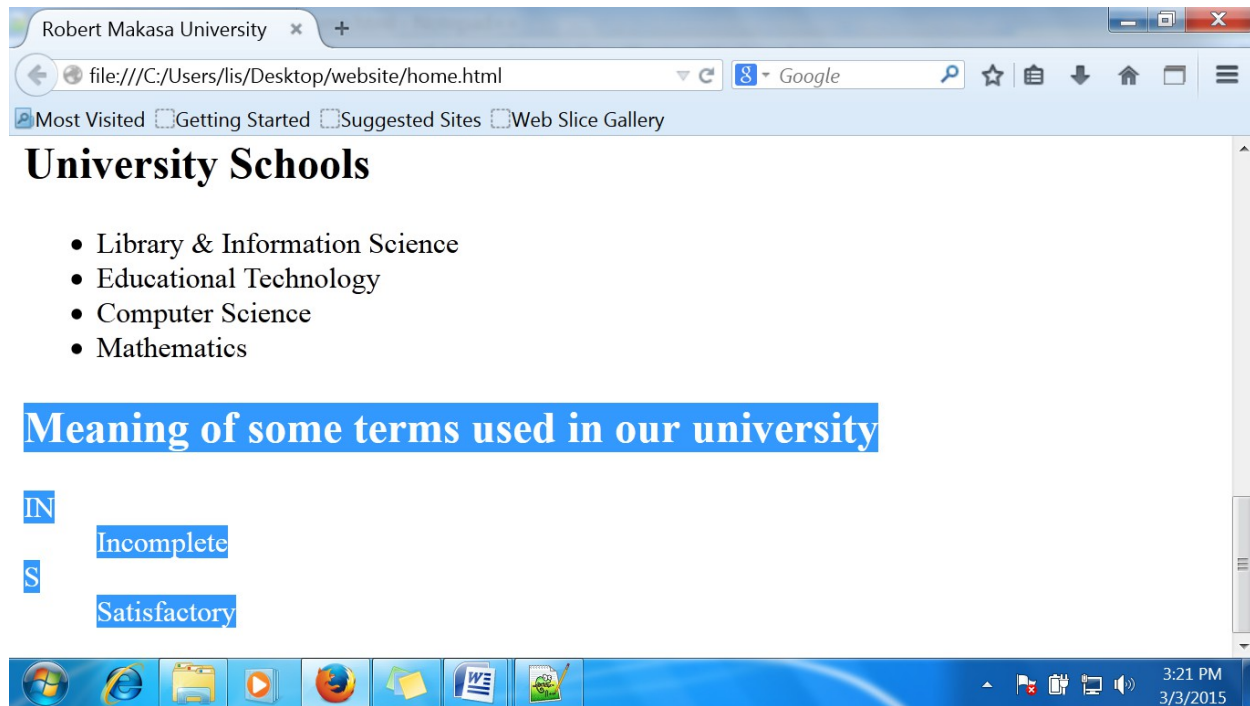


```
38         <li> Computer Science</li>
39         <li> Mathematics</li>
40     </ul>
41     <h2> Meaning of some terms used in our university</h2>
42     <dl>
43         <dt> IN</dt>
44         <dd> Incomplete</dd>
45         <dt> S</dt>
46         <dd> Satisfactory</dd>
47     </dl>
48
49
50
51 </body>
52 </html>
53
```

Hyper Text Markup Language file length : 1989 lines Ln : 48 Col : 9 Sel : 167 Dos\Windc UTF-8 w/o tIN: 3:19 PM 3/3/2015

Once you save and run the definition lists, you will see the below results.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



ix. Inserting images into the web page

At this point in time, it is important discuss and show how images are inserted into a web page. To start with, let us briefly look at types of images.

- **Types of images**

There are basically four formats in which images are stored; namely JPEG, TIFF, PNG and GIF.

- a. **JPEG**

JPEG stands for Joint Photographic Experts Group. This is the format in which most pictures are stored. Most cameras and web pages use JPEG. It supports 16 million colors. This image format allows compression of image. However, it results in the loss of picture quality during compression. It is therefore a loss compression image format.

- b. **TIFF**

The letters TIFF stand for Tagged Image File Format. This format is recommended for the storage of digitized information resources. It supports more than 16 million colors. It is lossless compression image format. Therefore, it used to keep high quality images. However, it is a heavy image format that requires massive storage space to keep images in this format.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

c. PNG

PNG stands for Portable Network Graphics. This image format is similar to TIFF but was recently developed. It supports more colors than JPEG and it is also lossless compression format. It is however not very much used.

d. GIF

The letters GIF stand for Graphics Interchange Format. It was developed earlier than JPEG. PNG is also lossless format. It supports 256 colors therefore not used to create high quality images. It is good for logos and other images that require fewer colors.

Note many images that we will be using are in JPEG or GIF and ensure that the compression of these images does not take away from the quality of the image.

- **Image Tag**

The image tag is a simple standalone tag. It has no partner like many another tags that we have learnt so far. The image tag is ``. This tag however has attributes and their values as shown below;

```
<img src="" width="" height="" alt="" />
```

Src- denotes the source for the image that we want to insert into our web page. Give the clear path for that image.

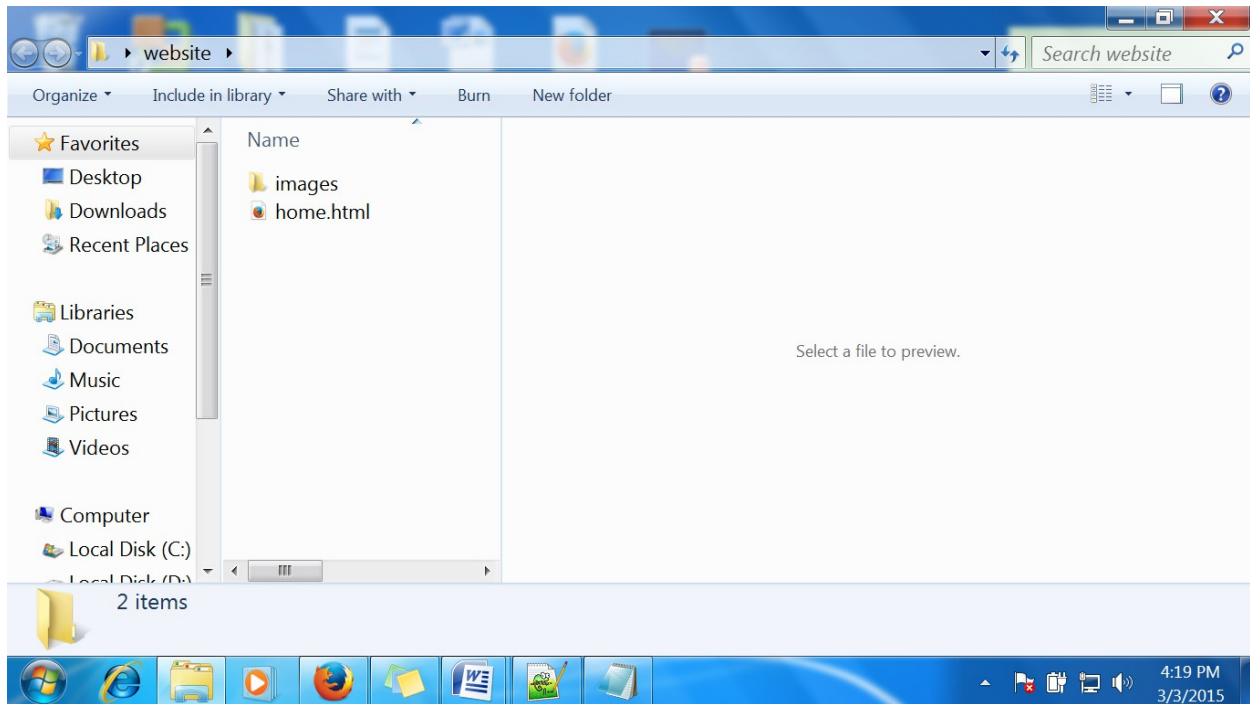
Width- put in the values in pixels or percentages on how wide you want the image to be displayed by the browser.

Height- similar to the width put the values of how high you want the image to be displayed.

Alt- stands for alternative. Here you put the actual name of the image you want to display. This saves two purposes; for the visually impaired colleagues' web browsers to read to the visually impaired users and secondly the alt value (name of the image) will display in case the link to the image is broken.

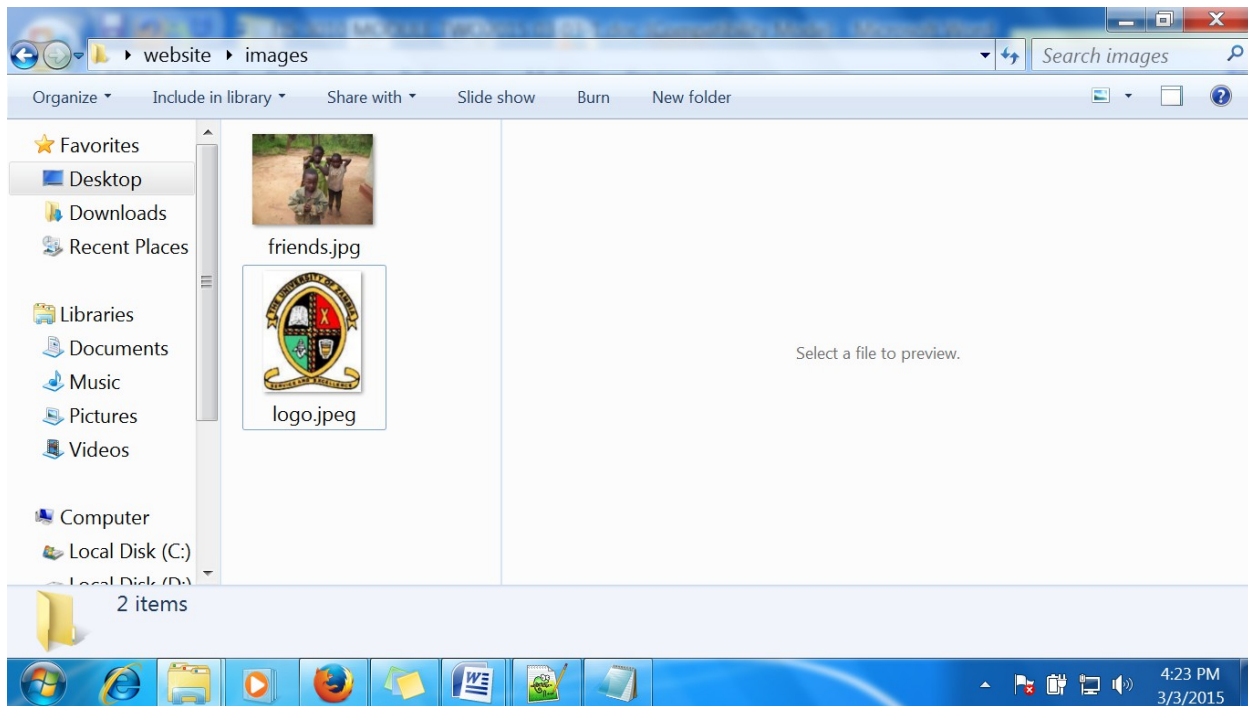
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Note: Before you begin thinking of inserting an image, create a sub folder in the working folder called **website**. This is what I have done. Do it before we proceed. Go to the folder **website**, open and create a sub folder called **images**.



All the images that you want to insert into your web page will be firstly compressed to meet the web standard and then dropped into the sub folder called images. I will put a logo for the University of Zambia and insert it into this web page. I will also drop a photo of some of the underprivileged children as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



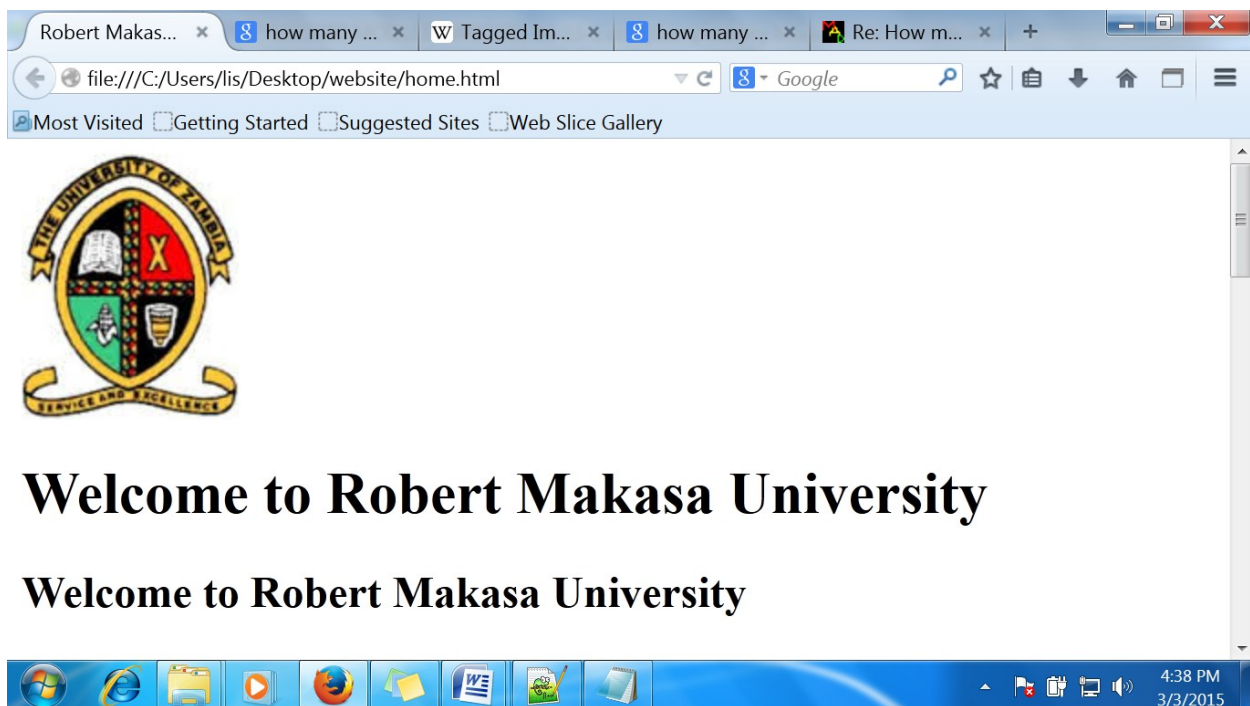
Having dropped all the needed images, I will go to my Notepad++ to write the tag for image and as follows.

```
C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9     
10
11     <h1> Welcome to Robert Makasa University</h1>
12     <h2> Welcome to Robert Makasa University</h2>
13     <h3> Welcome to Robert Makasa University</h3>
14     <h4> Welcome to Robert Makasa University</h4>
15     <h5> Welcome to Robert Makasa University</h5>
16     <h6> Welcome to Robert Makasa University</h6>
17   </body>
18 </html>
Hyper Text Markup Language file length : 2063 lines Ln : 9 Col : 73 Sel : 68 | Dos\Windc UTF-8 w/o BOM
4:37 PM 3/3/2015
```

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

In this example, I have not put the values for height and width. Therefore the browser will take the default sizes to display the image. However for the **src**, I have to give a correct path of the image that I want to insert as **images/logo.jpeg**. Any mistake with the name of the image in the src will result in an error; the image will not be displayed. If the extension of the image was gif, you need to write as such. If it was with an extension .jpg, write it as such or else they will be an error.

Can we save and run to see if the logo is inserted into our web page. Indeed the image has been inserted as shown below.

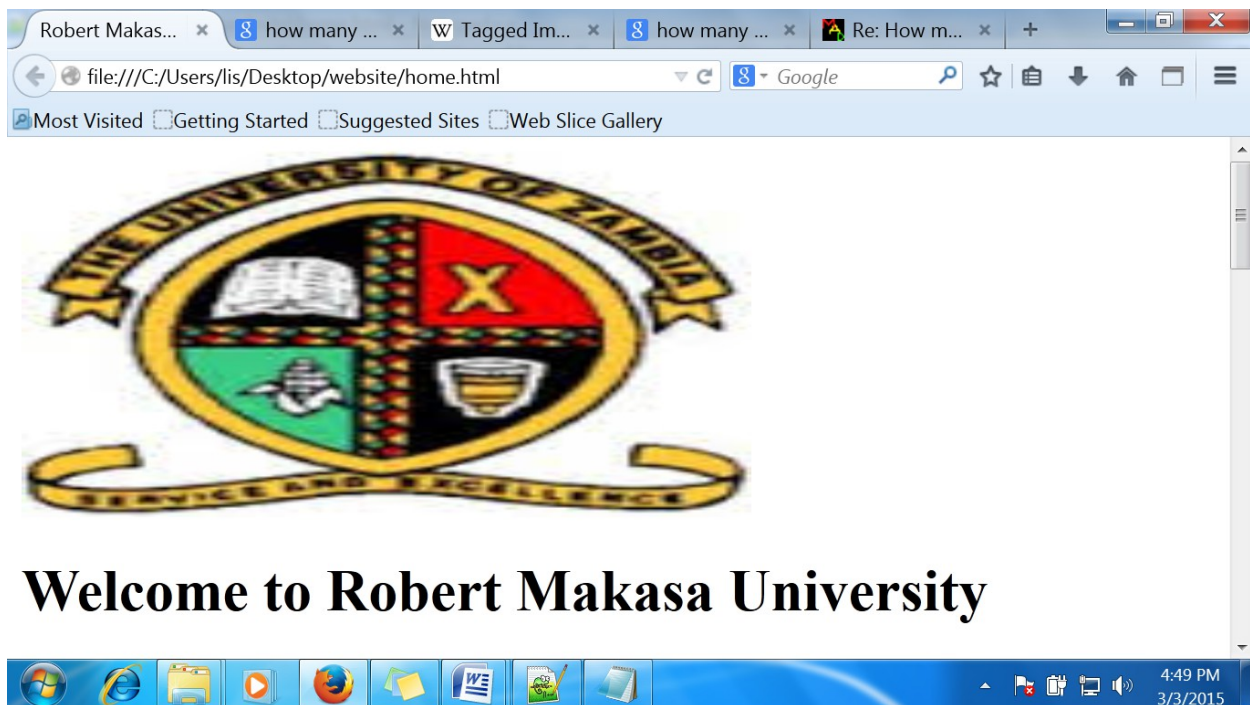


We can play with the image to change the width and height by putting our own values as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

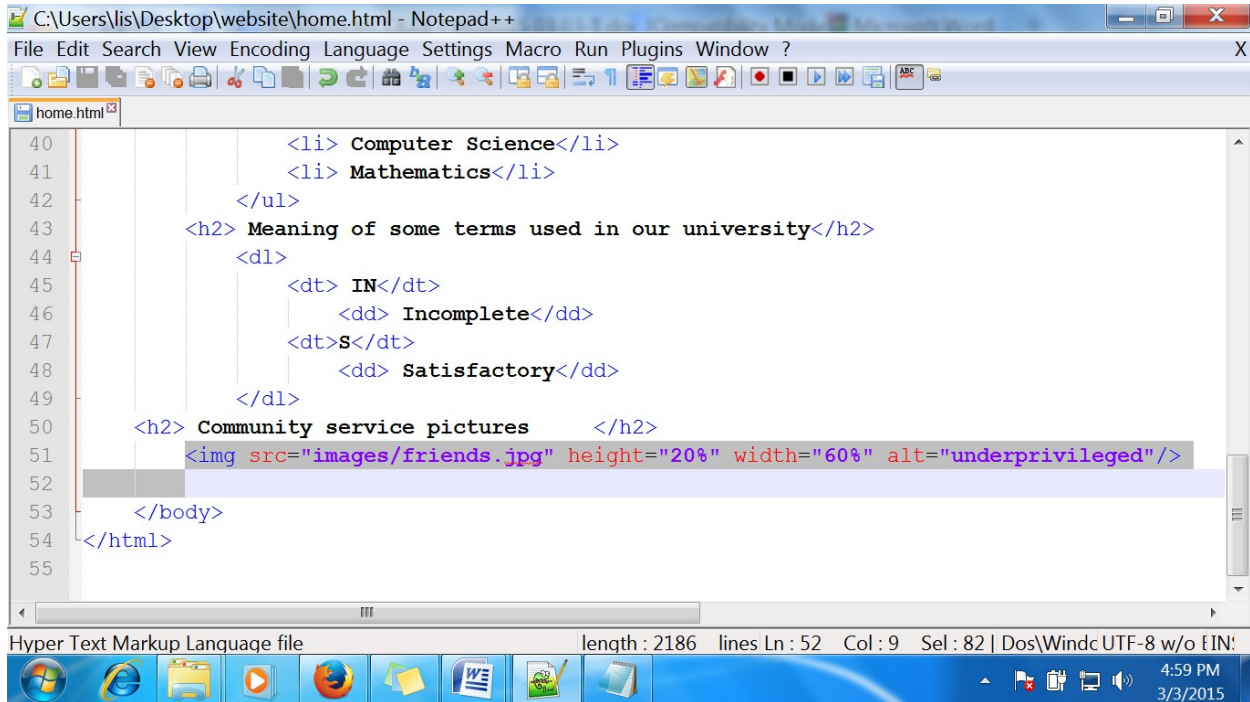
```
*C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9     
10
11     <h1> Welcome to Robert Makasa University</h1>
12     <h2> Welcome to Robert Makasa University</h2>
13     <h3> Welcome to Robert Makasa University</h3>
14     <h4> Welcome to Robert Makasa University</h4>
15     <h5> Welcome to Robert Makasa University</h5>
16     <h6> Welcome to Robert Makasa University</h6>
17   </body>
</html>
```

Once we save and run will see that the image is enlarged; it is bigger than it was before putting the values for the width and height.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Let us now insert another picture for my friends who are vulnerable and see what we will get. Ensure that the extension file is **jpg** not **jpeg** for this image or else you will not see the image.

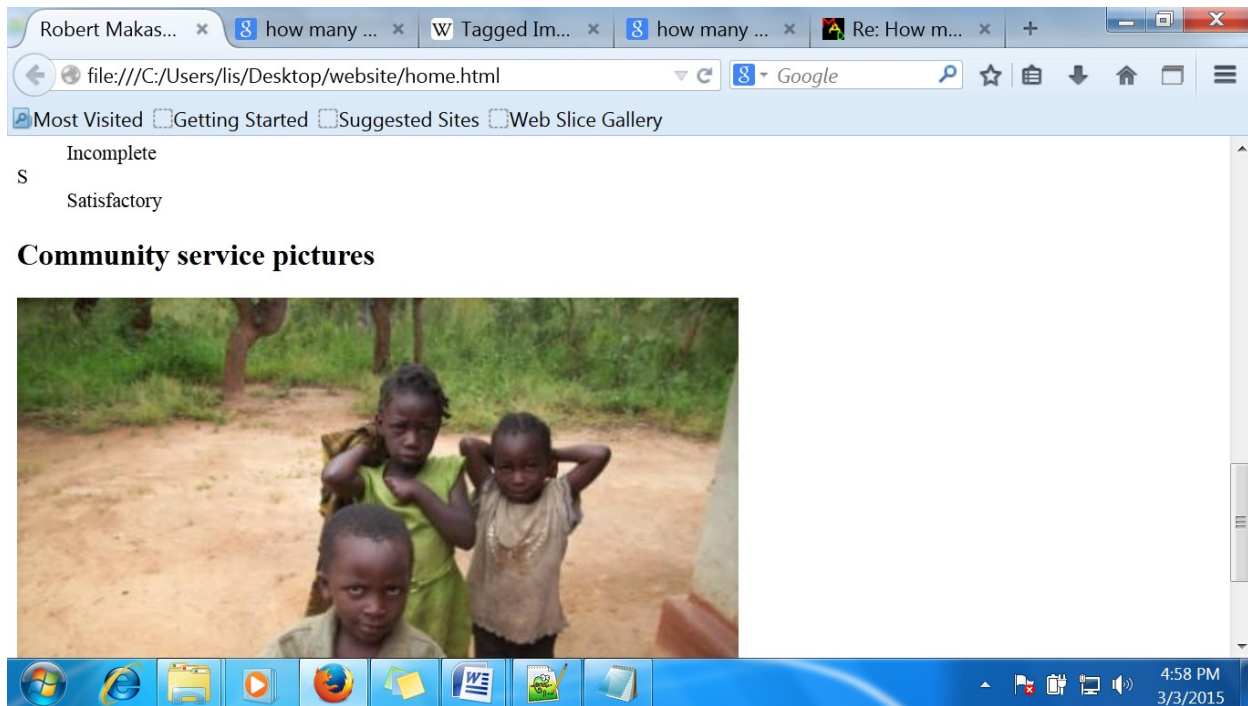


```
40         <li> Computer Science</li>
41         <li> Mathematics</li>
42     </ul>
43     <h2> Meaning of some terms used in our university</h2>
44     <dl>
45         <dt> IN</dt>
46         <dd> Incomplete</dd>
47         <dt>S</dt>
48         <dd> Satisfactory</dd>
49     </dl>
50     <h2> Community service pictures     </h2>
51     
52
53 </body>
54 </html>
55
```

Hyper Text Markup Language file length : 2186 lines Ln : 52 Col : 9 Sel : 82 | Dos\Windc UTF-8 w/o [IN: 4:59 PM 3/3/2015

Once we save and run we will end up with this.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



x. Links

There are basically two types of links; namely internal (local) and external links.

a. Internal/local links

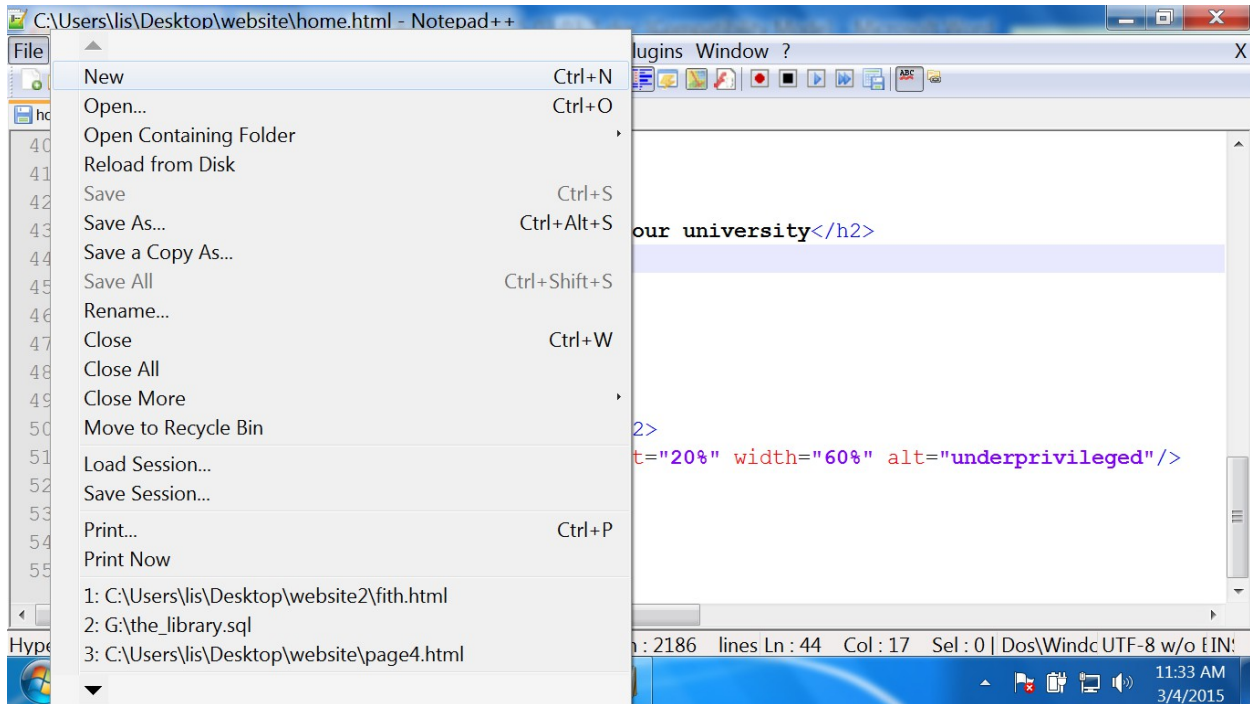
Internal links as the name suggests links web pages within a website. Assuming we create five web pages, we need to link them together. The tag that we use is the internal link `<a>`. Any link uses the `<a>` as a tag. This is the only tag that is not semantic. The link tag is also a paired tag. You should also know that this tag has attribute and its value as shown below.

`Name of link`

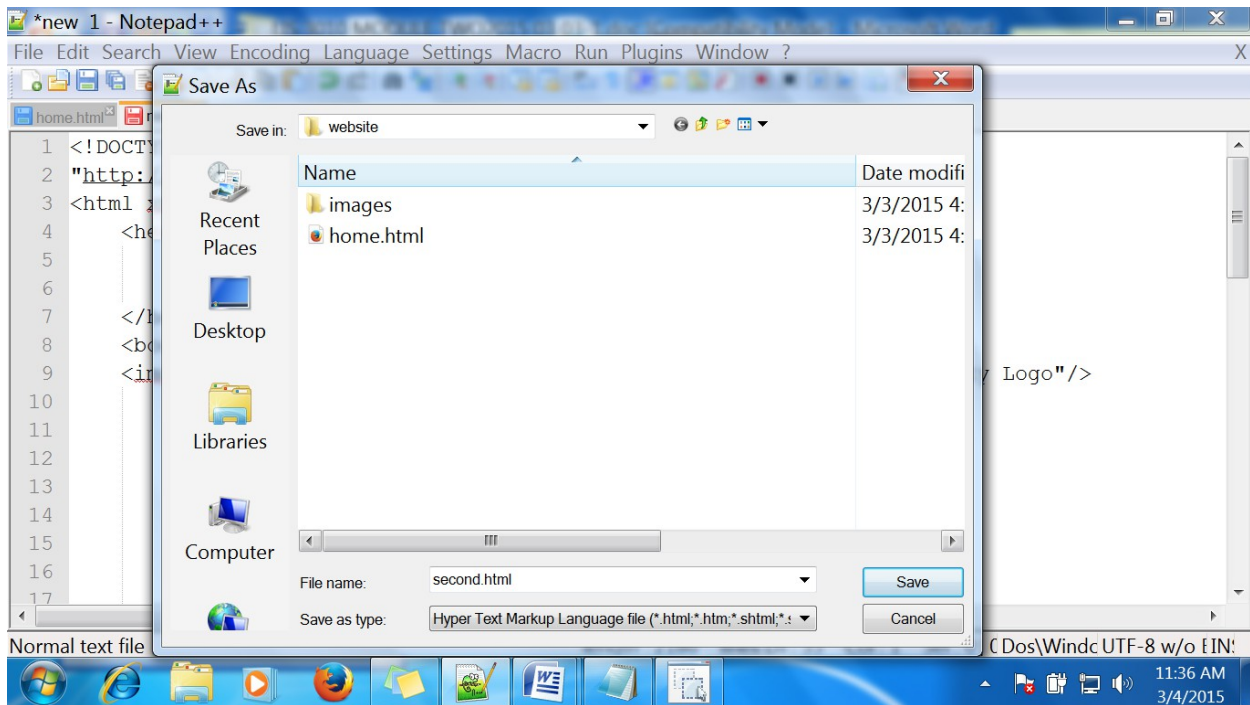
In this tag above, the **href** is the attribute name and **url** is the value. The **href** stands for hyper text reference while the **url** stands for the address of the page you want to link to.

Could we now begin to create four other web pages in **notepad++** and link them to the first web page called *home.html*. To create new html pages just copy and paste the first page in a new window of notepad++. To open the new window of notepad++, go on file and click on new, then paste the copied html page in that window and save it.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



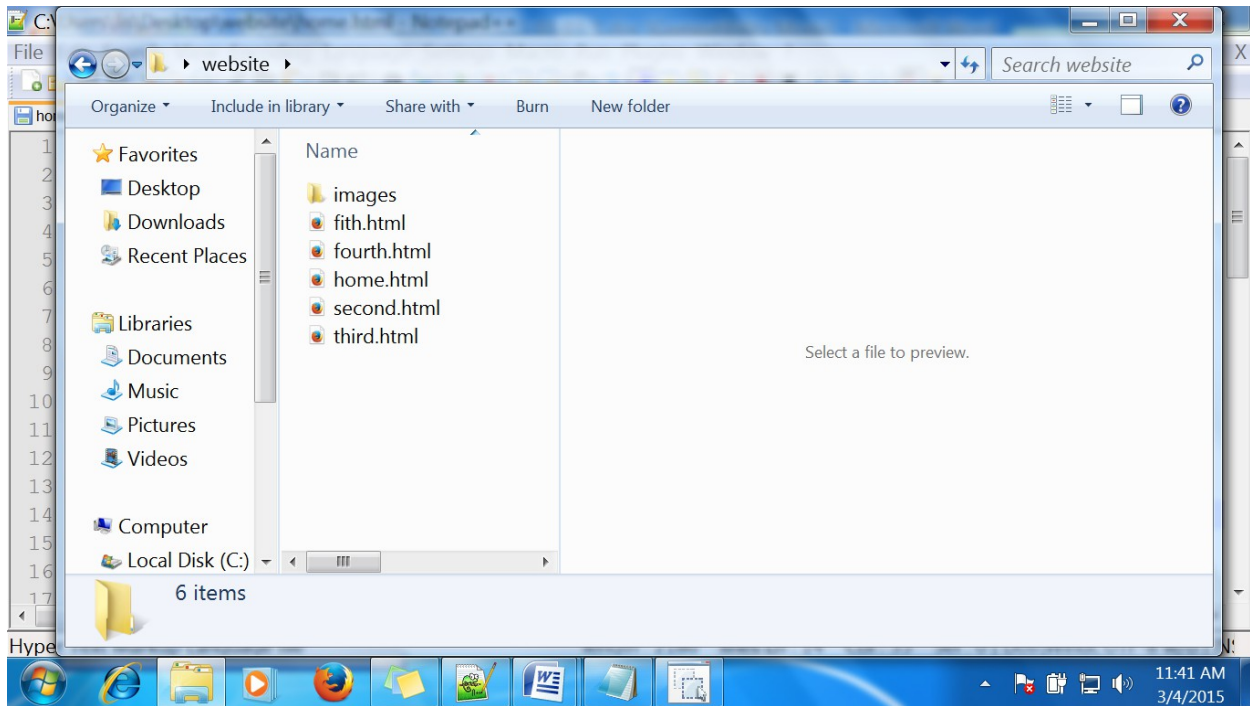
Once you paste it into the new window of notepad++, save the second web page in the working folder as *second.html*.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Follow the same procedure to create the other three web pages. Name them as *third.html*, *fourth.html* and the last as *fifth.html*.

Once you go to the working folder, you will see that you have created five web pages as shown below.

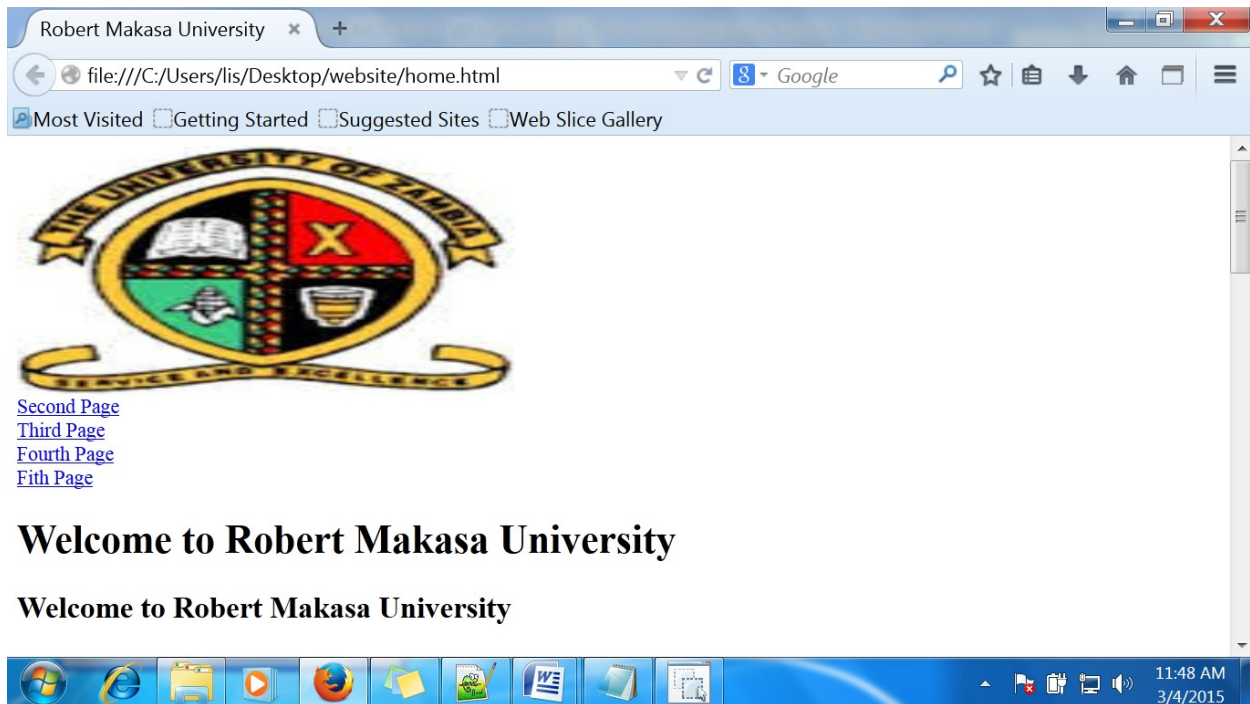


Now let us link the four web pages to the home page as demonstrated below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

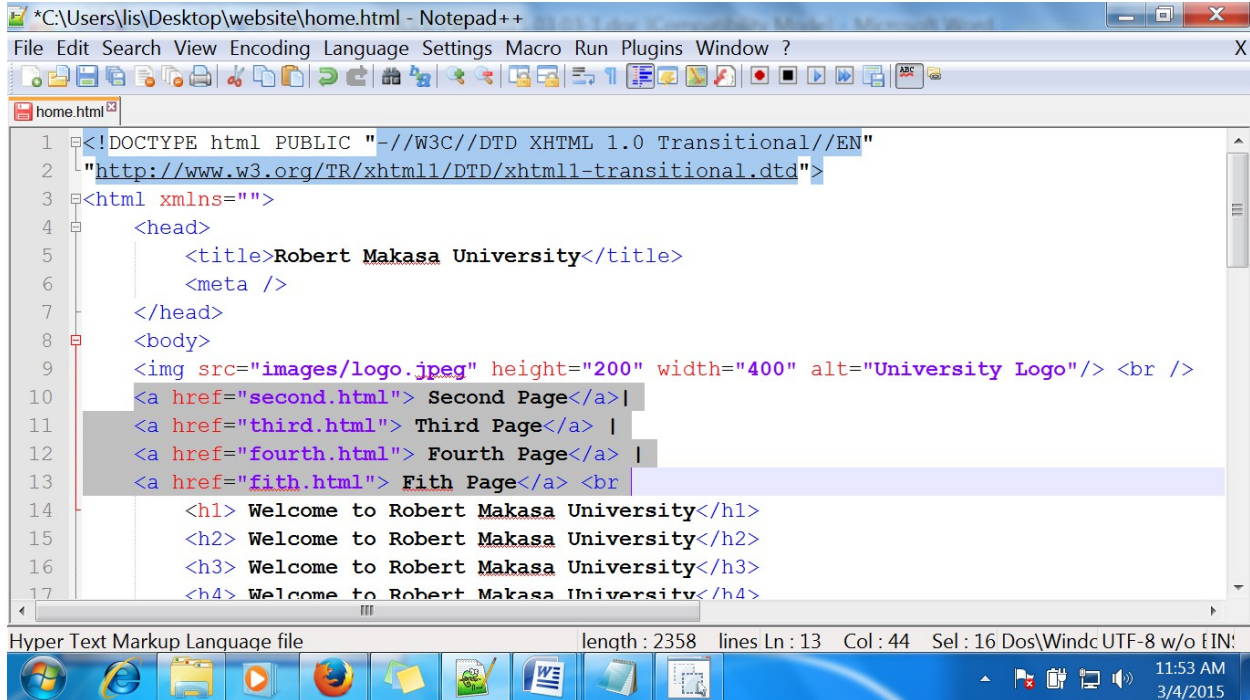
```
*C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9     
10    <a href="second.html"> Second Page</a> <br />
11    <a href="third.html"> Third Page</a> <br />
12    <a href="fourth.html"> Fourth Page</a> <br />
13    <a href="fifth.html"> Fith Page</a> <br />
14    <h1> Welcome to Robert Makasa University</h1>
15    <h2> Welcome to Robert Makasa University</h2>
16    <h3> Welcome to Robert Makasa University</h3>
17    <h4> Welcome to Robert Makasa University</h4>
Hyper Text Markup Language file length : 2369 lines Ln : 13 Col : 46 Sel : 18 Dos\Windc UTF-8 w/o BOM
11:46 AM 3/4/2015
```

Once we save and run we will see the links created that are clickable.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

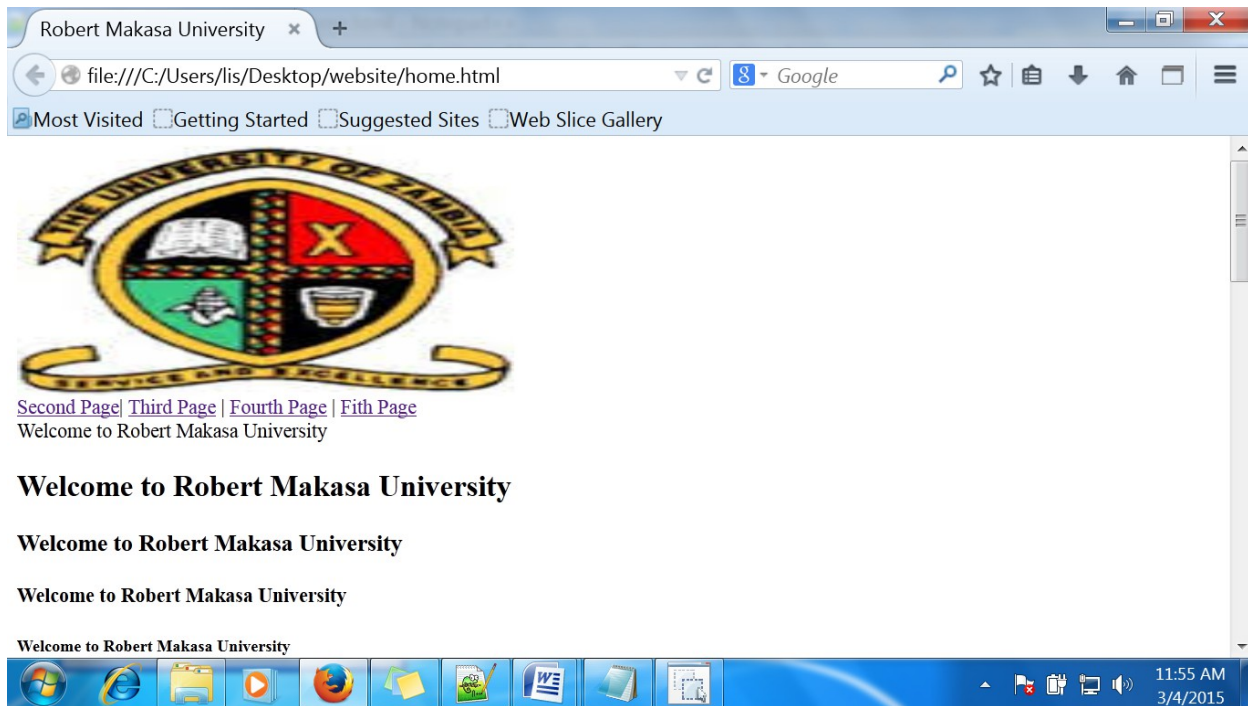
Click on the links and see if they are working. If they are not working it means there is a mistake in **url** (name of the page you want to link to). Wonderful, the links are working. Now we can do better by putting the links in one like and separate them with a pipe (|) so that we create a simple top menu. To do this go to the links and remove the break tag **
** and replace it with the pipes.



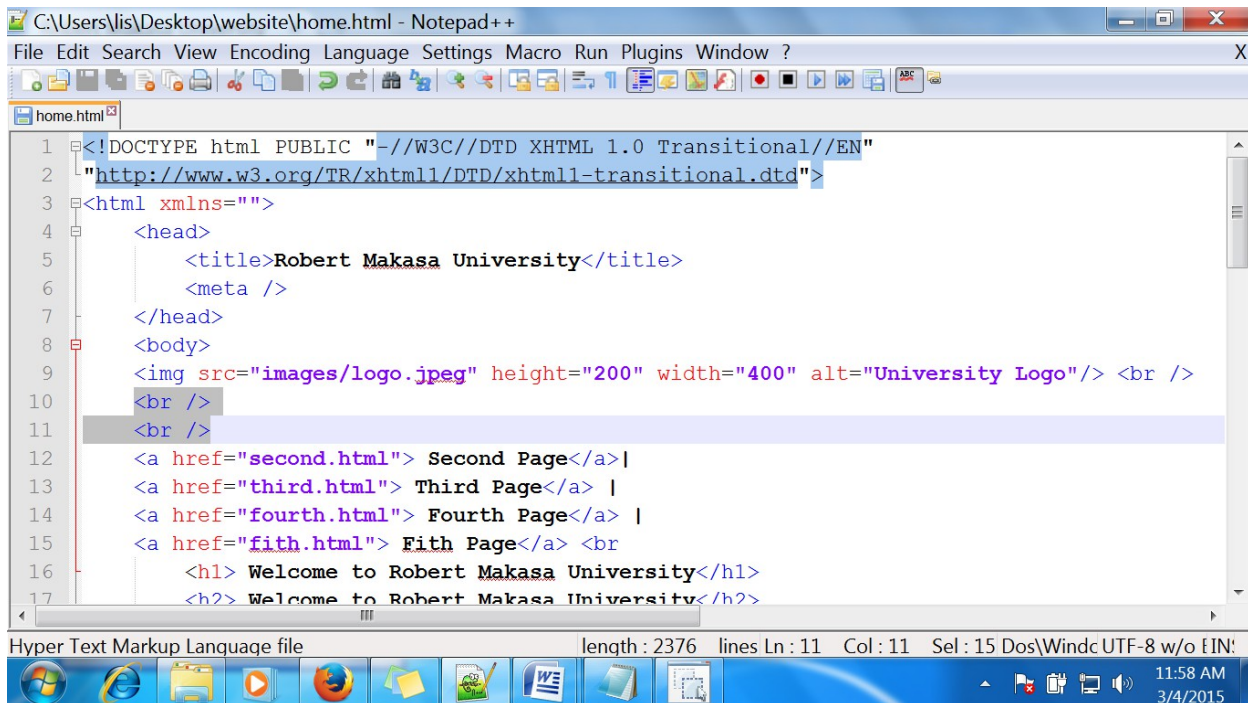
```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9      <br />
10    <a href="second.html"> Second Page</a> |
11    <a href="third.html"> Third Page</a> |
12    <a href="fourth.html"> Fourth Page</a> |
13    <a href="fith.html"> Fith Page</a> <br />
14    <h1> Welcome to Robert Makasa University</h1>
15    <h2> Welcome to Robert Makasa University</h2>
16    <h3> Welcome to Robert Makasa University</h3>
17    <h4> Welcome to Robert Makasa University</h4>
```

Once you save this, you will end up with the following results.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

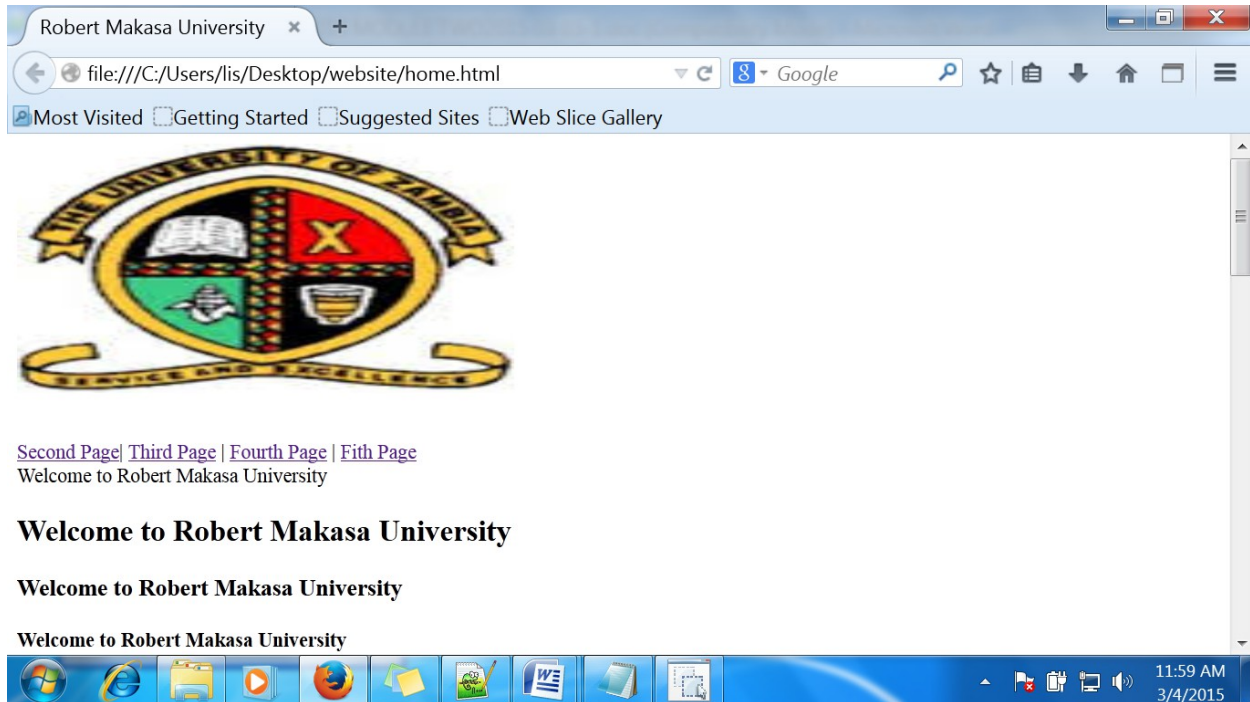


So far so good but the links are too close to the logo. Create two breaks `
` just after the logo so that it is detached from the internal links as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

After saving and run, you will see that the logo is detached from the links as shown below.



b. External Links

External links link your website to other external websites. You need to link your website to websites of your cooperating partners. You don't just link it to any other website. For instance, the University of Zambia website could be linked to the websites for Copperbelt and Mulungushi Universities respectively because they are partners.

The tag for external links is the same with the internal links. Note that for external links, you need to give the correct **url** for the website you want to link to. Let me now link this website to the University of Zambia, Mulungushi and Copperbelt universities.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
*C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
48 <h2> Meaning of some terms used in our university</h2>
49 <dl>
50 <dt> IN</dt>
51 <dd> Incomplete</dd>
52 <dt>S</dt>
53 <dd> Satisfactory</dd>
54 </dl>
55 <h2> Community service pictures </h2>
56 
57 <h2> External Links </h2>
58 <a href="http://www.unza.zm"> The University of Zambia</a> <br />
59 <a href="http://www.cbu.edu.zm"> Copper Belt University</a> <br />
60 <a href="http://www.mu.ac.zm"> Mulungushi University</a>
61 </body>
62 </html>
63
Hyper Text Markup Language file length : 2603 lines Ln : 60 Col : 19 Sel : 18 Dos\Windc UTF-8 w/o BOM
12:11 PM 3/4/2015
```

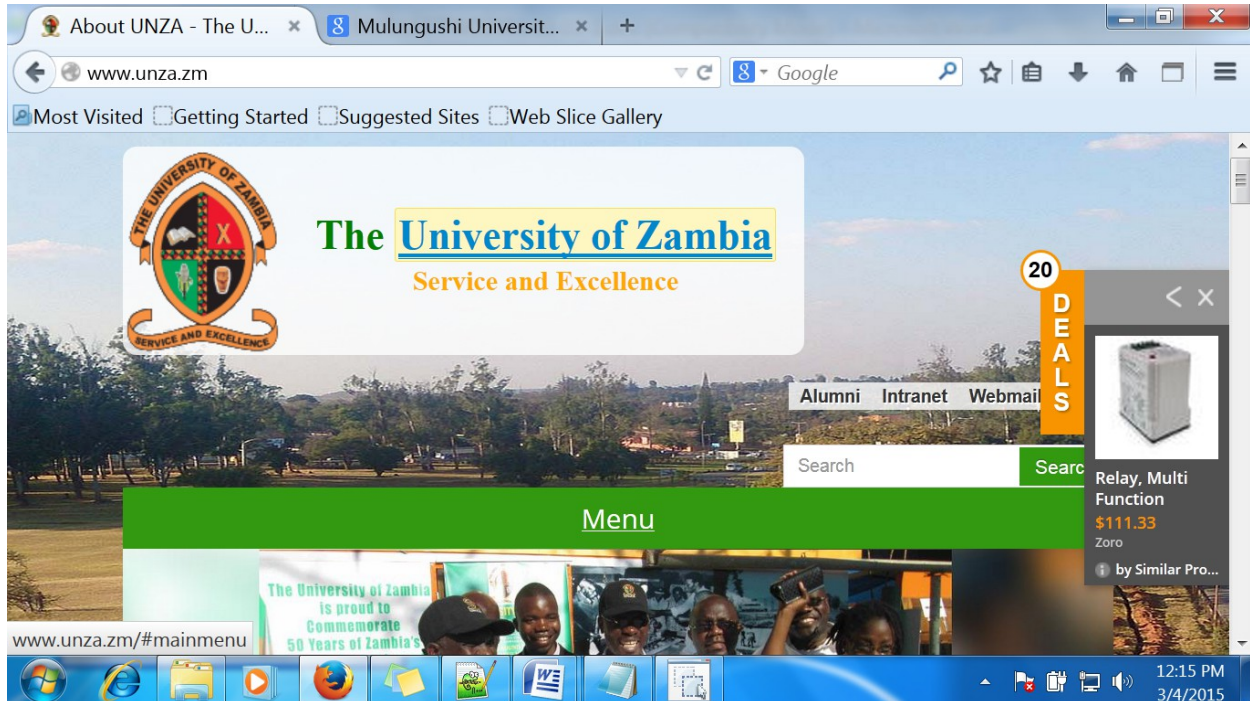
Let us save these external links and run. We will definitely see the external links created.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Try the links by clicking one of them. If you do not have access to the internet, you will be unable to connect to these external websites. Let me try the University of Zambia website since I have internet connectivity.

Good! The link is working; it takes me to UNZA home page as shown below.



xi. E-mail Link

It is common on websites to provide e-mails address so that users can give you feed back. The e-mail link uses the tag `<a>`. However, this tag nests some elements that has made it possible to change the way the e-mail link is presented to the users as we will see below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

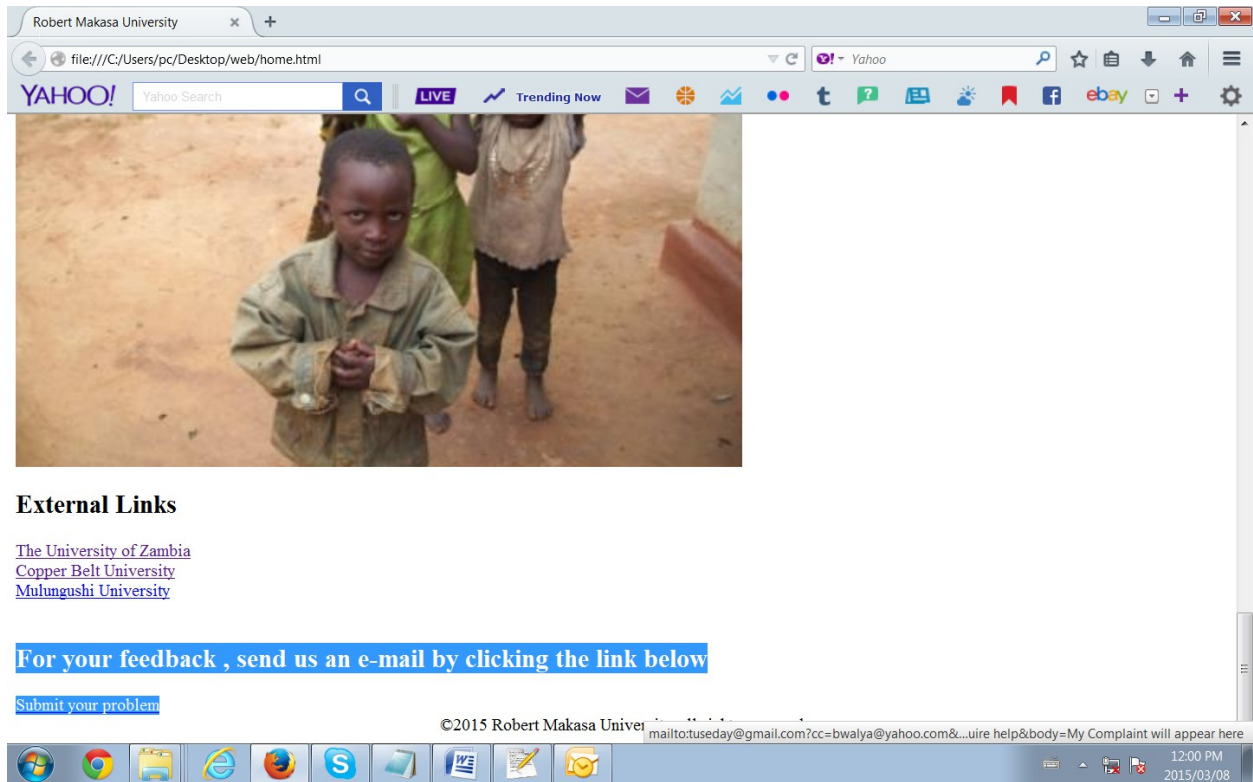
```
C:\Users\pc\Desktop\web\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html home.html
117
118 <h2> Community service pictures </h2>
119 
120 <h2> External Links </h2>
121 <a href="http://www.unza.zm"> The University of Zambia</a> <br />
122 <a href="http://www.cbu.edu.zm"> Copper Belt University</a> <br />
123 <a href="http://www.mu.ac.zm"> Mulungushi University</a>
124 <br />
125 <br />
126 <h2> For your feedback , send us an e-mail by clicking the link below</h2>
127 <a href="mailto:tuesday@gmail.com?
128 cc=bwalya@yahoo.com&
129 bcc=leisha@gmail.com&
130 subject= Require%20help&
131 body=My%20Complaint%20will%20appear%20here">
132 Submit your problem
133 </a>
134
135
136
137
138
Hyper Text Markup Language file 4297 chars 4589 bytes 147 lines Ln: 134 Col: 5 Sel: 260 (276 bytes) in 1 r; Dos/Windows ANSI INS
11:47 AM 2015/03/08
```

Before we save and run the e-mail link, I need to explain a few things which might be confusing to you. In this e-mail, we are using the <a> tag but there are some elements and symbols nested in this tag.

As you may see, the main e-mail address [tuesday@gmail.com](mailto:tuesday@gmail.com?) has a question mark (?) at the end. This question mark is just used to separate the principal e-mail address from other element in this link. Secondly, the carbon copy email, second carbon copy email and the subject all have the ampere sign (&) at the end. This sign is used to separate these elements from each other. Further, we also notice that the characters %20 has been used in this email link. Its function is to create space between the words. Without the use of %20, you will not see the spaces between the words when you click on the link.

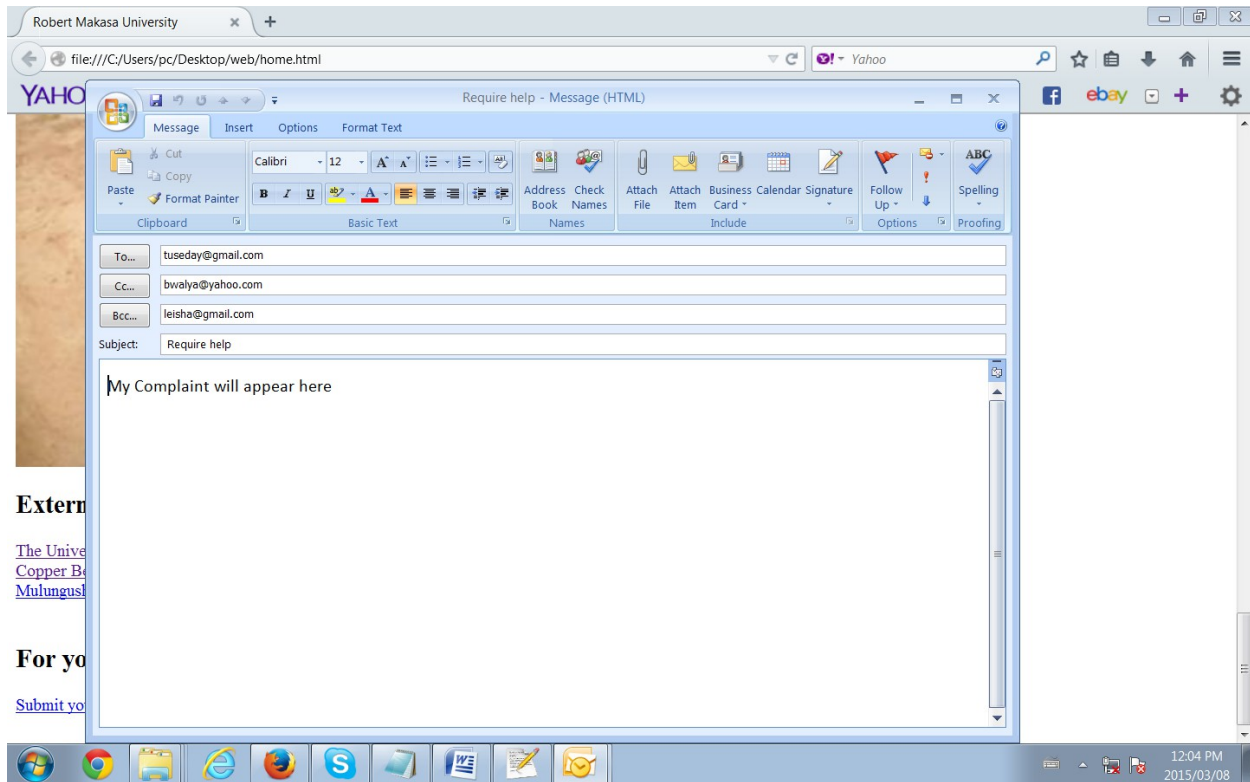
Having explained some meaning and uses of some symbols, let us save and run the e-mail link and see and what we will get.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Once we click on the link **submit your problem**, our email software called outlook will open. It will ask you to configure it but click on **No** and click **next** for the sake of seeing how the e-mail details will appear in outlook. If your machine on which you are creating the website is the real server, you need to seriously configure the server for e-mail so that you will be able to receive e-mails. Having avoided configuration, you will see the below outlook window, with your pre-entered e-mail addresses as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Once you write the message, you can send it. That is cool and easy way of providing feed back through the e-mail link.



Summary

In this unit we have learnt how to use various XHTML formatting tags to create the contents of a web page. We learnt that individual tags are used to accomplish specialized tags. For instance, if one wants to insert an image into the web page, he/she should use the image tag ``. The tags that we have learnt in this unit include the heading tag `<h>`, paragraph tag `<p>`, horizontal tag `<hr />`, highlight tag `<mark>`, image tag ``, three list tags (``, `` and `<dl>`). Other tags learnt include the super and subscript tags `<sup>` and `<sub>`. We further learnt the link tag `<a>` which is used to create both internal and external tags. This unit has also shown us how to use the link tag `<a>` to create an email link where our users can send us feedback.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Activity

1. Practice the use of all the formatting tags that we have learnt in unit three by creating your web page.

Unit 4: Creation of tables and forms using various XHTML tags

Introduction

Unit four shows you how to create tables and forms in your web pages. Tables for instance are very important when you want to put certain information in an organized way. Often a time, we use tables to create organized menus. Tables are also generally used to organize information; let say list of products and their prices. Forms on the other hand are used to collect data from the users and post into a web database application. They are very important in e-commerce websites and other websites where user's registration is needed. This unit will also introduce you to some general tags; the division tags that are used to divide the web pages into sections or divisions. These division tags are needed when we are applying Cascading Style Sheets to our web page.

Aims

Unit four aims at demonstrating how to create tables and forms in a web page. This unit also aims at showing you how to create a copyright statement. Further it aims at showing you how to create division tags that are essential to decorating a web page using Cascading Style Sheets.

Objectives

At the end of this unit, you should be able to do the following:

- Creating tables
- Creating forms
- Create the copyright statement.
- Creating divisions in a web page

Resources

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

As indicated in unit two and three, you need a computer which should have at least two web browsers installed on it (*Internet explorer* and *Fire Fox*). It should also have a web editor called Note pad+++. Check if your computer has the above mentioned tools. If does not have, download and install them on your computer.

Addition Resources

You need books and other information resources that deal with website designing using XHTML.

Below are some of the books that can supplement this module:

Castro, E (2003). *HTML for the World Wide Web: with XHTML and CSS*.5th Ed. Berkeley: Pearson Education

Deitel.P.J and Deitel.H.M (2009). *Internet & World Wide Web: How to Program*. New York: Pearson Educational International

Deitel.P.J and Deitel.H.M (2003). *C++: How to Program*. 4th Ed. New York: Pearson Educational International

Lavanya, L (2011). *HTML 5: Magic wand for Web Designing*. Chennai: Ane Books Pvt Ltd.

Musciano,C and Kennedy, B (20007).*HTML & XHTML: The Definitive Guide*. Chennai: Shroff Publishers & Distributors PVT.LTD

Schultz, D and Cook, C (2007). *Beginning HTML with CSS and XHTML: Modern Guide and Reference*.New York: Press



Time Frame

You need **two** weeks to finish this unit.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

4.1 Introduction

As indicated the introduction of this unit, tables and forms are indispensable in the organization of information in a web page. Tables make it easy to create better organized menus. Further, they are critical in listing products and prices for organizations that use web sites for e-commerce. Forms on the other hand are a necessity for web sites that capture user's details. These sites are common in educational and e-commerce websites where users have to submit certain information the web database system.

4.2 Creation of tables

Tables are important in keeping information. To create a table, we use the table tag **<table>**. This tag is a paired tag and it has many nested tags. This means that some tags are put inside the opening and closing tags of the table tags. The tags that are nested in the table tag include:

<caption>-This is the tag used to create the title of the table,

<tr> -The tag which stands for table row; it is used to create table rows

<th>- This stands for table head. It is a tag used for the table head. This tag is nested in the **<tr>** tag.

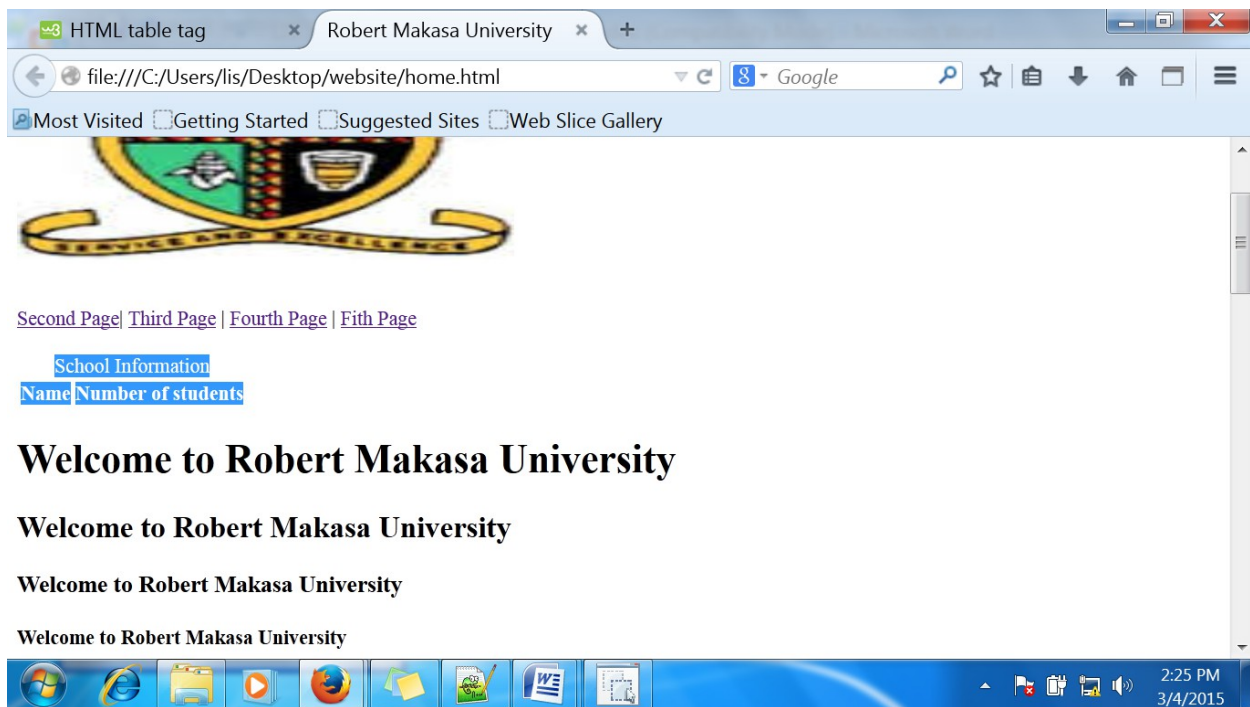
<td>- This stand for table data; it is a tag used to create data in the cell of the table row. This tag is also nested in the **<tr>** tag

All these tags are paired tags. Having explained the tags that are nested in the table tag, let us now create a table that will use to keep information about the Schools of Robert Makasa University.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

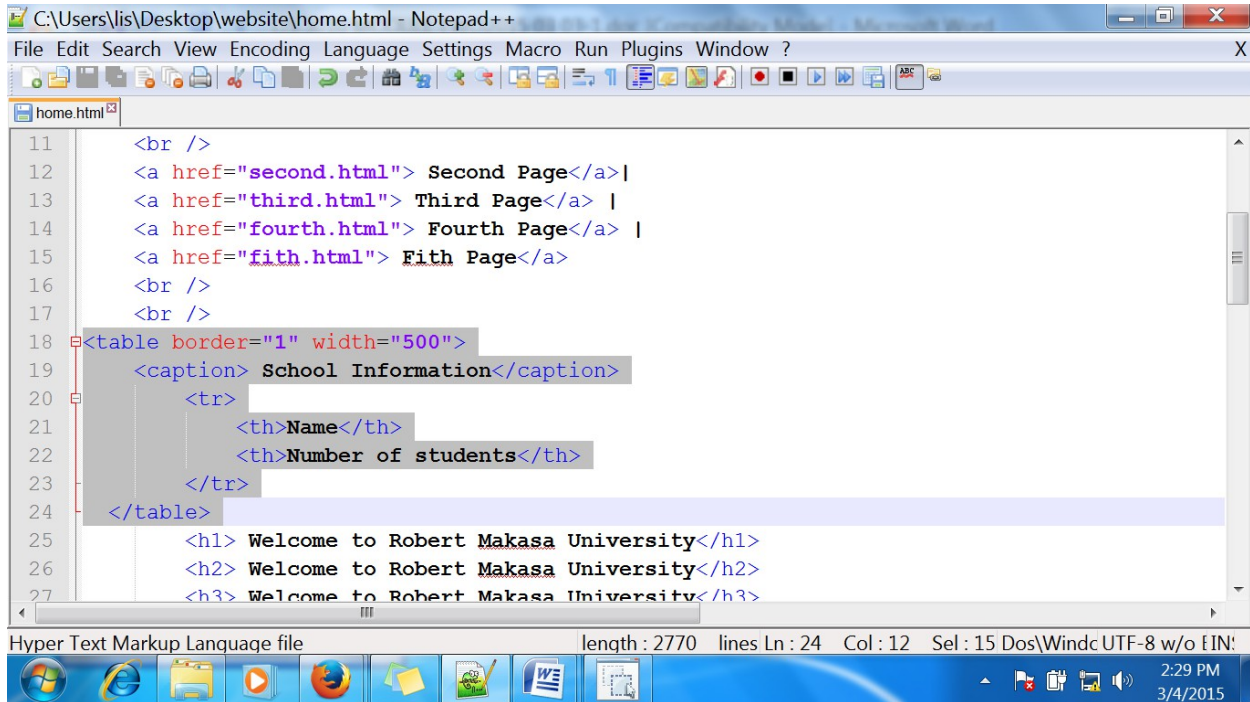
```
*C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
11 <br />
12 <a href="second.html"> Second Page</a>|
13 <a href="third.html"> Third Page</a> |
14 <a href="fourth.html"> Fourth Page</a> |
15 <a href="fifth.html"> Fith Page</a>
16 <table>
17 <caption> School Information</caption>
18 <tr>
19 <th>Name</th>
20 <th>Number of students</th>
21 </tr>
22 </table>
23 <h1> Welcome to Robert Makasa University</h1>
24 <h2> Welcome to Robert Makasa University</h2>
25 <h3> Welcome to Robert Makasa University</h3>
26 <h4> Welcome to Robert Makasa University</h4>
27 <h5> Welcome to Robert Makasa University</h5>
Hyper Text Markup Language file length : 2729 lines Ln : 22 Col : 12 Sel : 12 Dos\Windc UTF-8 w/o EIN:
2:22 PM 3/4/2015
```

Once we save and run the page, you will see that we have created a table with only columns. No rows and data in the cells. In addition, the table will have no borders. Try to save and run.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Let us now add borders so that we have a good looking table. To add the borders, go to the table opening tag and declare an attribute called **border** and give it value in pixels and you can also specify the width of the table as shown below.



```
11 <br />
12 <a href="second.html"> Second Page</a>|
13 <a href="third.html"> Third Page</a> |
14 <a href="fourth.html"> Fourth Page</a> |
15 <a href="fifth.html"> Fifth Page</a>
16 <br />
17 <br />
18 <table border="1" width="500">
19 <caption> School Information</caption>
20 <tr>
21 <th>Name</th>
22 <th>Number of students</th>
23 </tr>
24 </table>
25 <h1> Welcome to Robert Makasa University</h1>
26 <h2> Welcome to Robert Makasa University</h2>
27 <h3> Welcome to Robert Makasa University</h3>
```

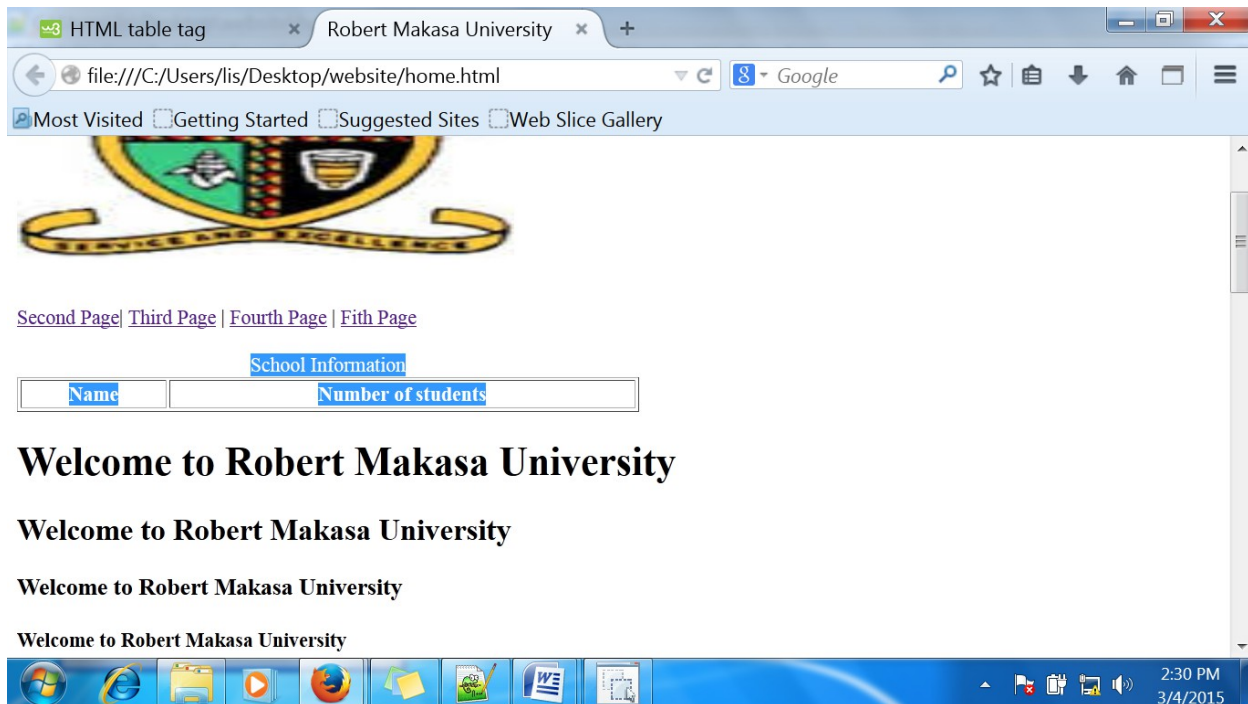
The screenshot shows a Notepad++ window with the following HTML code:

```
<br />
<a href="second.html"> Second Page</a>|
<a href="third.html"> Third Page</a> |
<a href="fourth.html"> Fourth Page</a> |
<a href="fifth.html"> Fifth Page</a>
<br />
<br />
<table border="1" width="500">
<caption> School Information</caption>
<tr>
<th>Name</th>
<th>Number of students</th>
</tr>
</table>
<h1> Welcome to Robert Makasa University</h1>
<h2> Welcome to Robert Makasa University</h2>
<h3> Welcome to Robert Makasa University</h3>
```

The status bar at the bottom indicates: Hyper Text Markup Language file, length : 2770, lines Ln : 24, Col : 12, Sel : 15, Dos\Windc UTF-8 w/o BOM, 2:29 PM, 3/4/2015.

Once you save and run, you will see the following results.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



This looks good but we can use the **heading tags** to make sure that the caption is displayed as a heading. To do that, nest the heading tag in the caption tag. Having done that let us now create rows and their contents as demonstrated below.

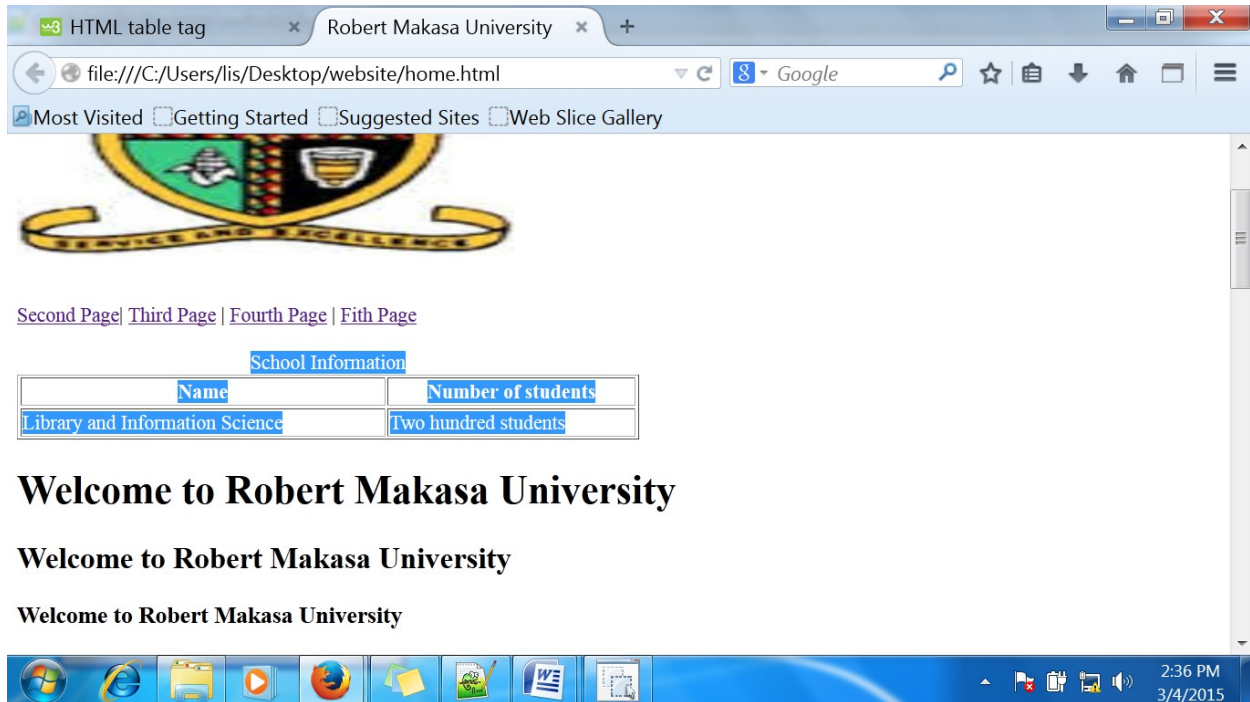
```
14 <a href="fourth.html"> Fourth Page</a> |
15 <a href="fifth.html"> Fifth Page</a>
16 <br />
17 <br />
18 <table border="1" width="500">
19   <caption> School Information</caption>
20   <tr>
21     <th>Name</th>
22     <th>Number of students</th>
23   </tr>
24   <tr>
25     <td> Library and Information Science</td>
26     <td> Two hundred students</td>
27   </tr>
28 </table>
29 <h1> Welcome to Robert Makasa University</h1>
30 <h2> Welcome to Robert Makasa University</h2>
```

Hyper Text Markup Language file length : 2868 lines Ln : 27 Col : 14 Sel : 94 Dos\Windc UTF-8 w/o tIN:

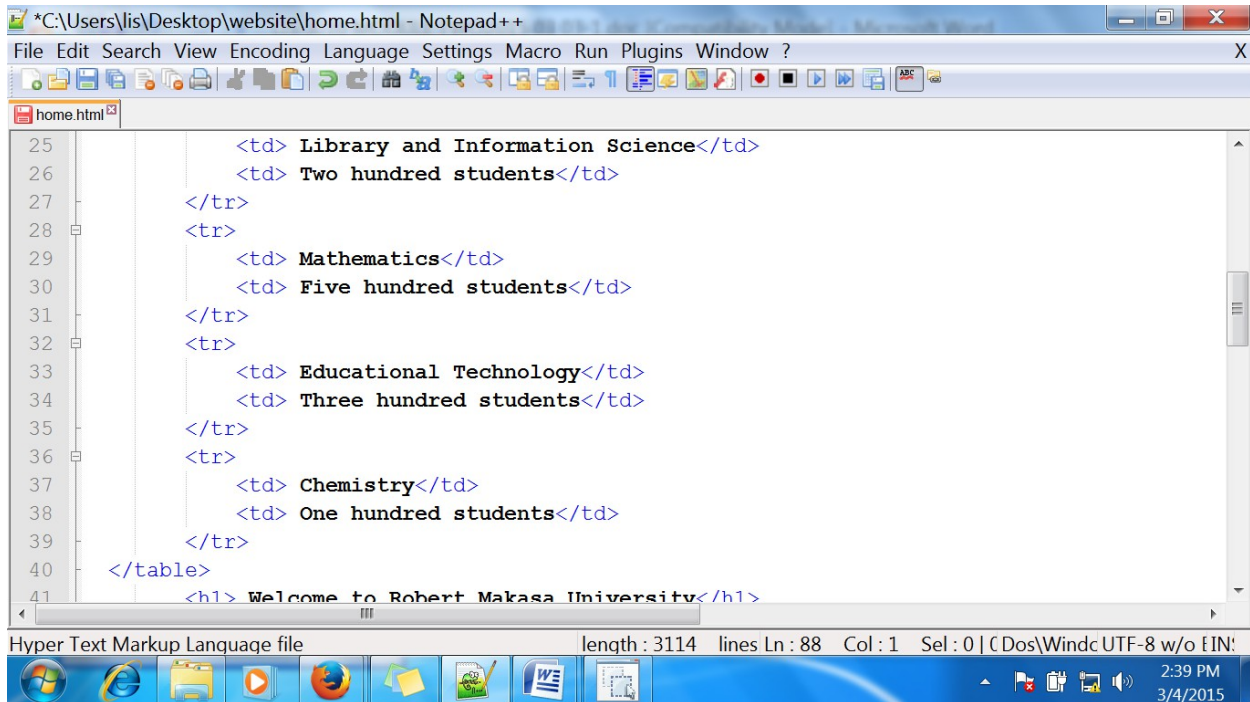
2:34 PM
3/4/2015

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Once we save and run we will see that we have added one data row.

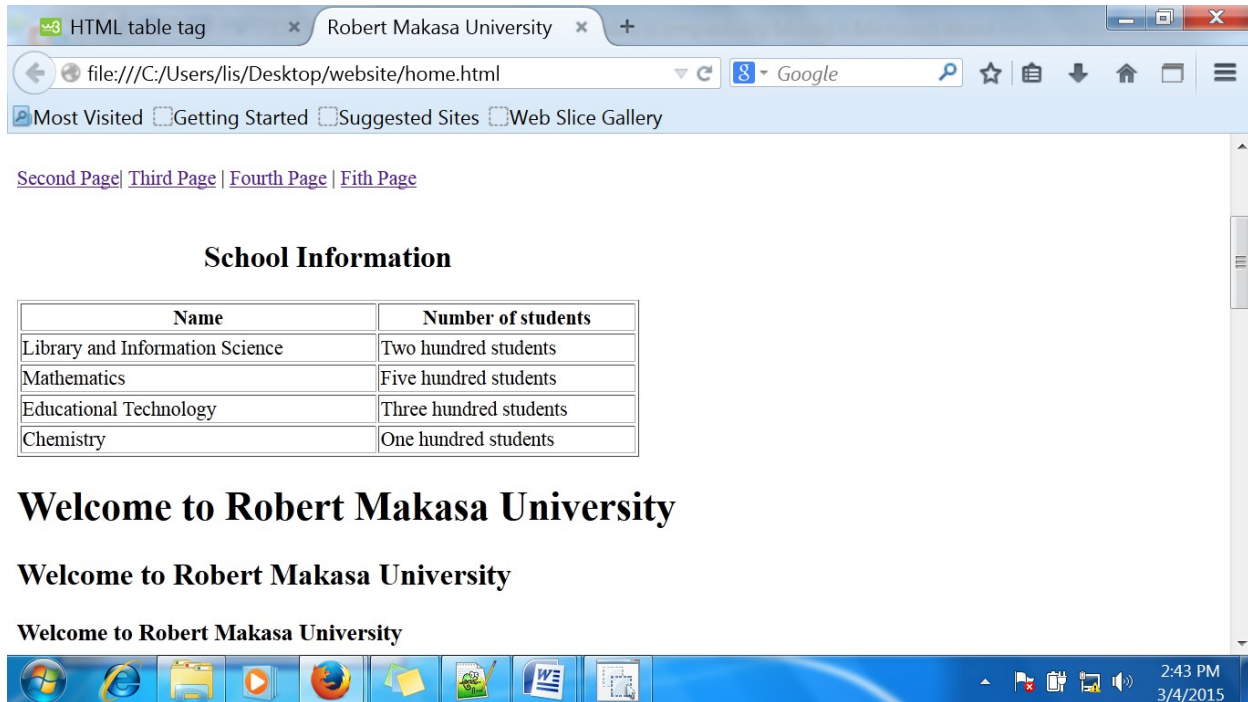


Let us add more data row using the first example and run.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Let us now save and preview to see the results.



Well, you have learnt how to create a basic table. **Note** that you can create a table with columns or rows that are bigger than normal ones. This is achieved by using the attribute called **span**.

This attribute should have the value indicating the number of rows or columns to span or merge. Assuming we want to have the first row in the table to be two times bigger than the other rows, we will write 2 as the attribute value. So it will be like: **<td rowspan= “2”>**.

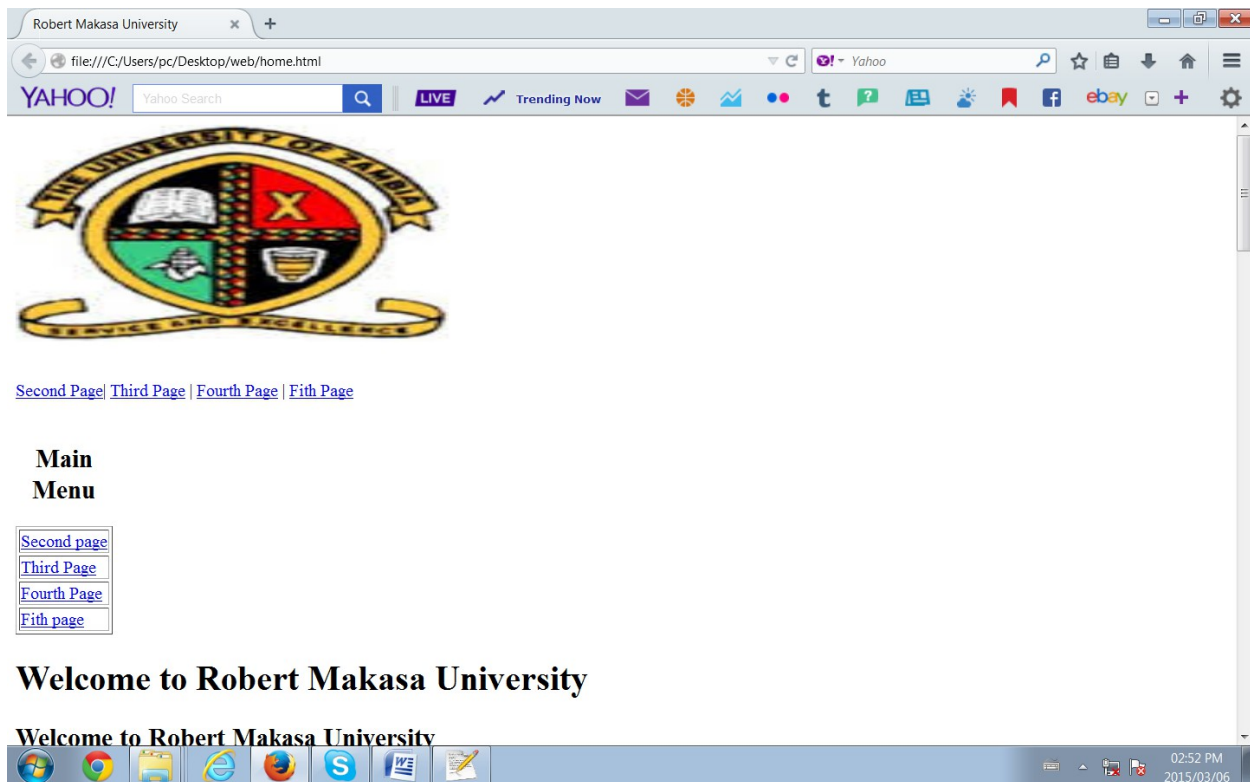
Tables are very important in creating menus. You can easily create the menu using a table. You can do this by nesting the **<a>** in the **<td>** of the table as I will demonstrate below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
16 <br />
17 <br />
18 <table border="1">
19 <caption> <h2>Main Menu</h2></caption>
20 <tr>
21 <td> <a href="second.html"> Second page</a></td>
22 </tr>
23 <tr>
24 <td> <a href="third.html">Third Page</td>
25 </tr>
26 <tr>
27 <td> <a href="fourth.html"> Fourth Page</td>
28 </tr>
29 <tr>
30 <td> <a href="fith.html"> Fith page</td>
31 </tr>
32 </table>
```

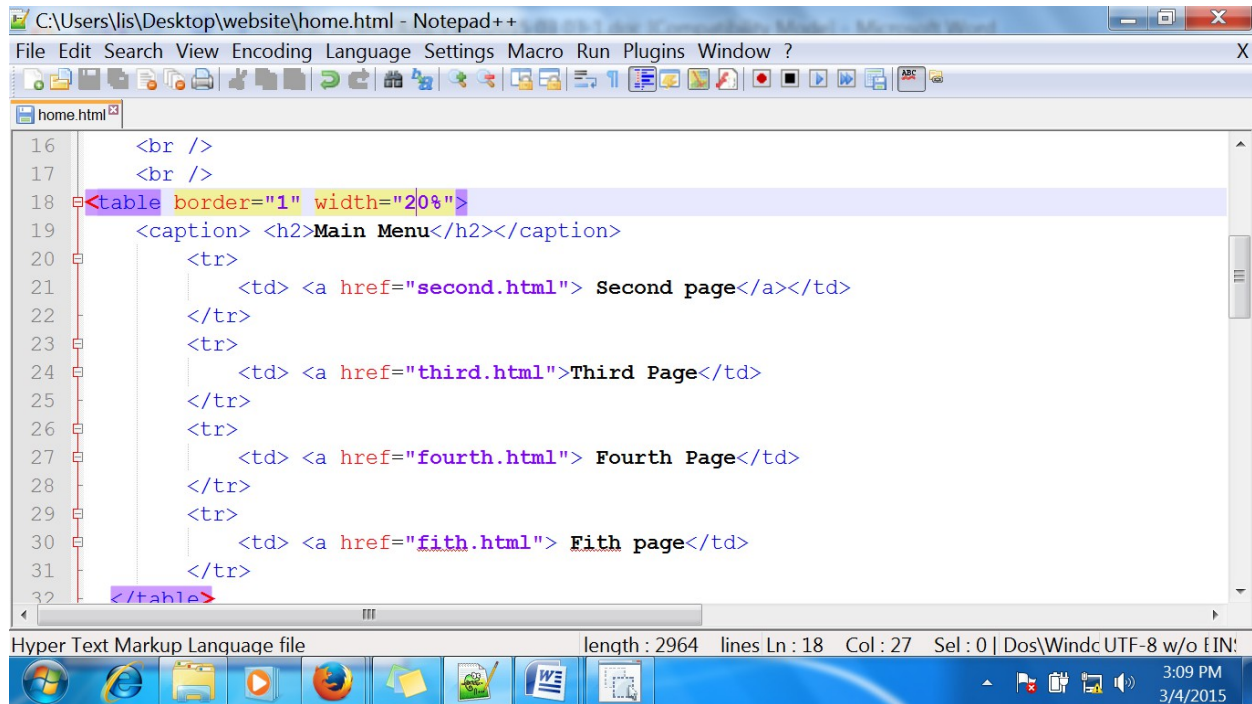
Hyper Text Markup Language file length : 2952 lines Ln : 18 Col : 18 Sel : 0 | Dos\Windc UTF-8 w/o EIN: 3:04 PM 3/4/2015

When we save and run, we see a menu put in a table as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

As you can see, a menu has been created but it is too small. Let us add the width size of the table. Let say we put the width to 20% and save then we run.



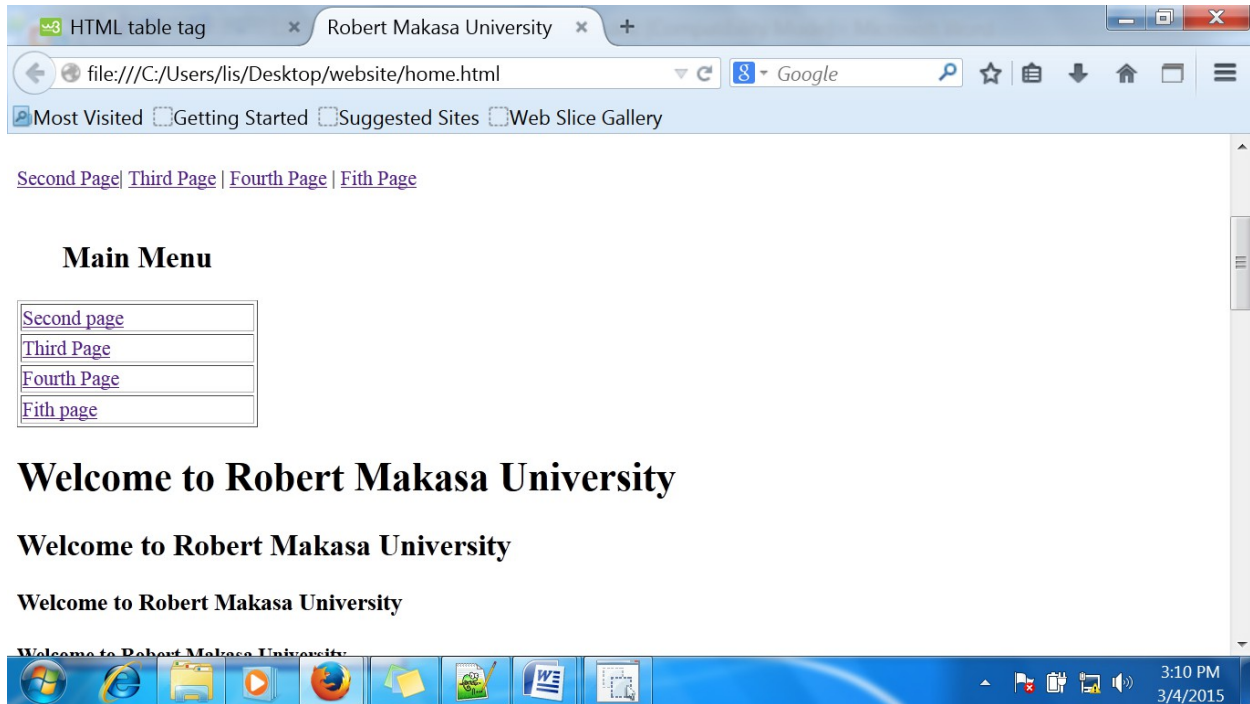
The screenshot shows a Notepad++ window with the following HTML code:

```
16 <br />
17 <br />
18 <table border="1" width="20%">
19 <caption> <h2>Main Menu</h2></caption>
20 <tr>
21 <td> <a href="second.html"> Second page</a></td>
22 </tr>
23 <tr>
24 <td> <a href="third.html">Third Page</td>
25 </tr>
26 <tr>
27 <td> <a href="fourth.html"> Fourth Page</td>
28 </tr>
29 <tr>
30 <td> <a href="fifth.html"> Fith page</td>
31 </tr>
32 </table>
```

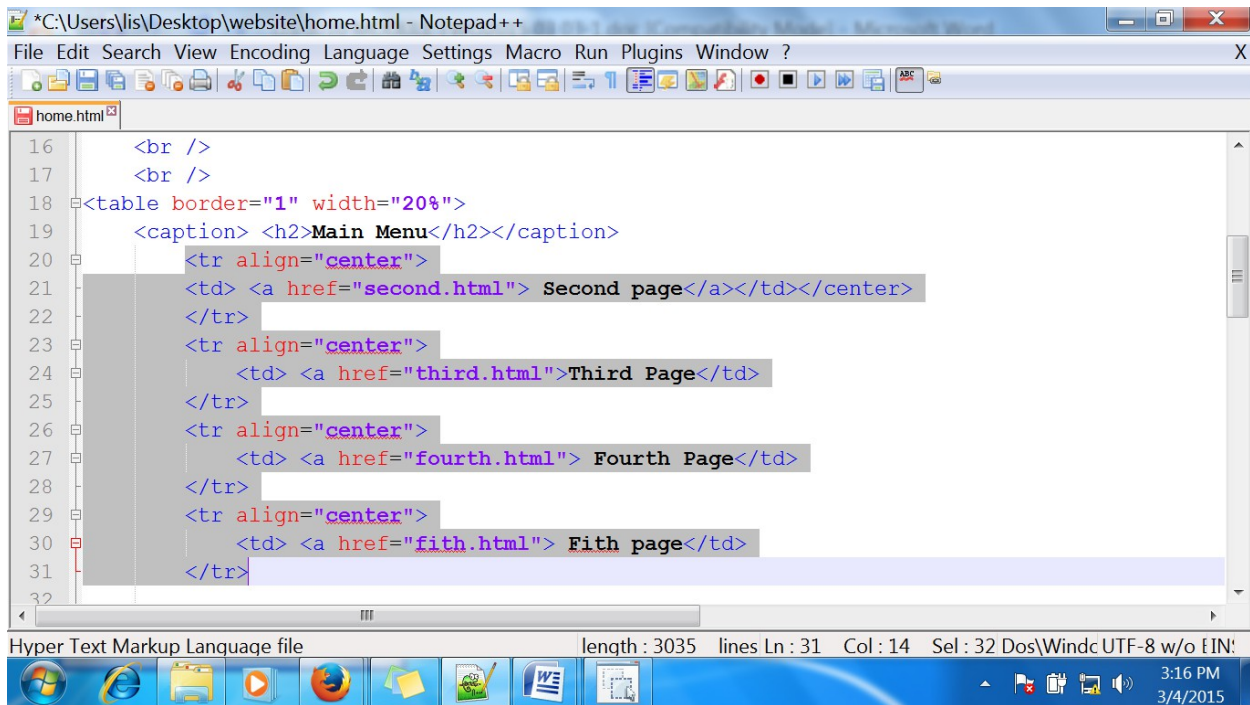
The status bar at the bottom indicates: Hyper Text Markup Language file, length : 2964, lines Ln : 18, Col : 27, Sel : 0 | Dos\Windc UTF-8 w/o BOM, 3:09 PM, 3/4/2015.

Once we save, we will see that the table width is increased to 20% of the total screen.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

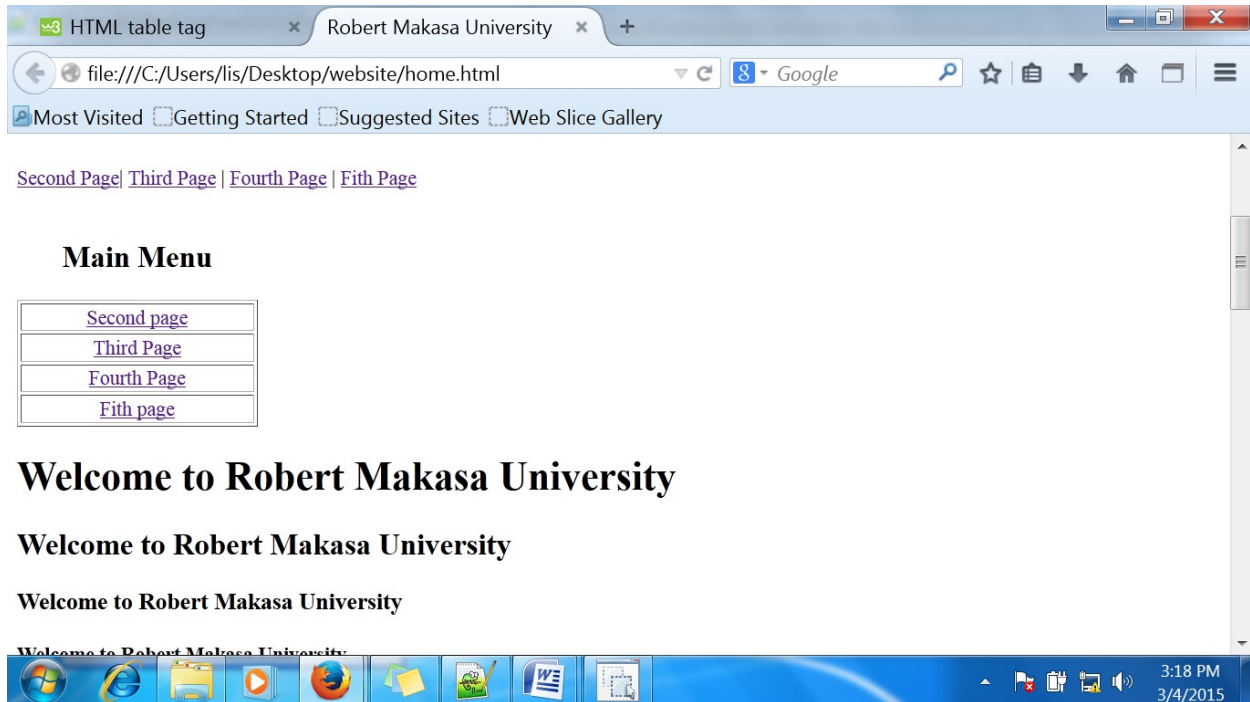


The table looks good but we can center the contents by introducing the attribute **align** to the **<tr>** opening tag and the value should be **center** as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Once you save and run, you will see that the contents of the table are centered as shown below.



4.3 Forms

Forms are very important in website design as they are used to collect information which is submitted to web database applications. Today's websites are built for business therefore they do collect information from users.

- **Types of forms**

There are a number of forms used to pass data to the server (server database). These types of forms include **text fields, check box, and radio button** and **submit button forms**. Whatever the form we want to create, the tag is the same. It is the form tag **<form>**. This is also a paired tag. The form tag has attributes and values. One of the attribute is **action** whose value is a program which handles form; the form handler. This form handler is mainly written in PHP and other scripting languages such as Java scripting. A form handler is a program that processes the form and put its contents into the database of a web database application. There is also another attribute which is called **method** and it's value is either **GET** or **POST**. The attribute method specifies the way the form contents will be put into the database. There are two ways in which form data is put into the database either by GET or POST.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

If the data to be communicated to the database is passive; not sensitive, the GET method will be used. When you use GET, the form data will be visible in the page address as **form.php?firstname=Tuesday&lastname=Bwalya**. The GET method is used mainly when sending information from the browser to the search engine. The GET is also appropriate when one is sending fewer amounts of data.

On the other hand, POST is used when data to be sent to server database is sensitive as it offers better security than GET. In addition, POST is used when large amount of data is to be sent to the server database. Note: We will be unable to see how these forms are processed because our web page is a static web page. Unless we created a dynamic web page using additional web programming languages such as PHP.

It is important also to mention here that, the form tag nests a tag called input `<input>`. It is a standalone tag. This input tag has attributes and values. One of the input's attributes is **type**. The type attribute specifies what type of the form will be created. If for example, we say: `input type="text"`, this implies that a form to be created is a text based form where users will type text. If we say: `input type="submit"`, it entails that the form to be created is a submit form.

```
<form action="form.php" method="Get">
```

```
<input type="text">
```

```
</form>
```

In the above example, the name of the program that handles forms is called **form.php** and the method to be used to pass the form contents to the database is GET.

Let us now begin creating the actual forms.

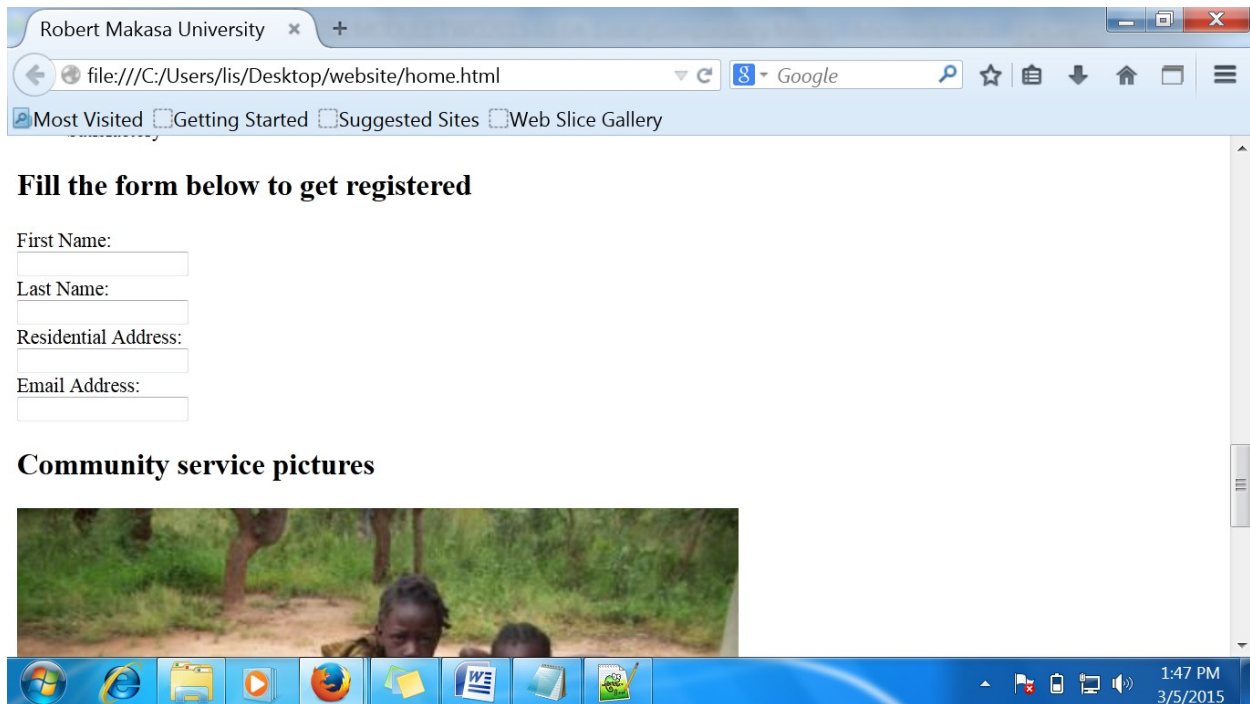
a) Text field form

As already alluded to, these types of form allow the user to type text in the form that is later submitted. The tags are follows:

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

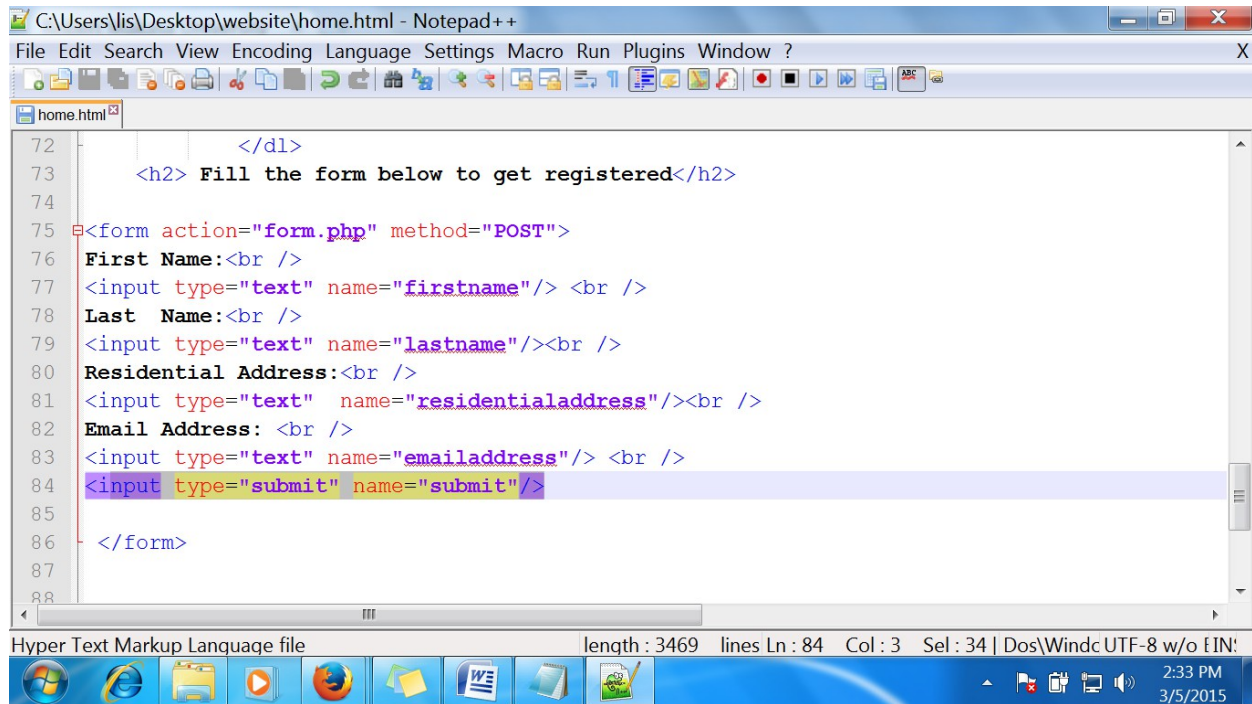
```
C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
72     </dl>
73     <h2> Fill the form below to get registered</h2>
74
75     <form action="form.php" method="POST">
76     First Name:<br />
77     <input type="text" name="firstname"/> <br />
78     Last Name:<br />
79     <input type="text" name="lastname"/><br />
80     Residential Address:<br />
81     <input type="text" name="residentialaddress"/><br />
82     Email Address: <br />
83     <input type="text" name="emailaddress"/> <br />
84
85
86     </form>
87
88
Hyper Text Markup Language file      length : 3433   lines Ln : 86   Col : 9   Sel : 387 Dos\Windc UTF-8 w/o EIN:
12:15 PM 3/5/2015
```

Once we save and run, we will see that indeed a text based form has been created.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Nice form but we need to add a **submit button** so that once you click on **submit**, the form is submitted to our server database. **Note** that your form will not be submitted because your website is not linked to a server database and that you have not created a form handler program in PHP.

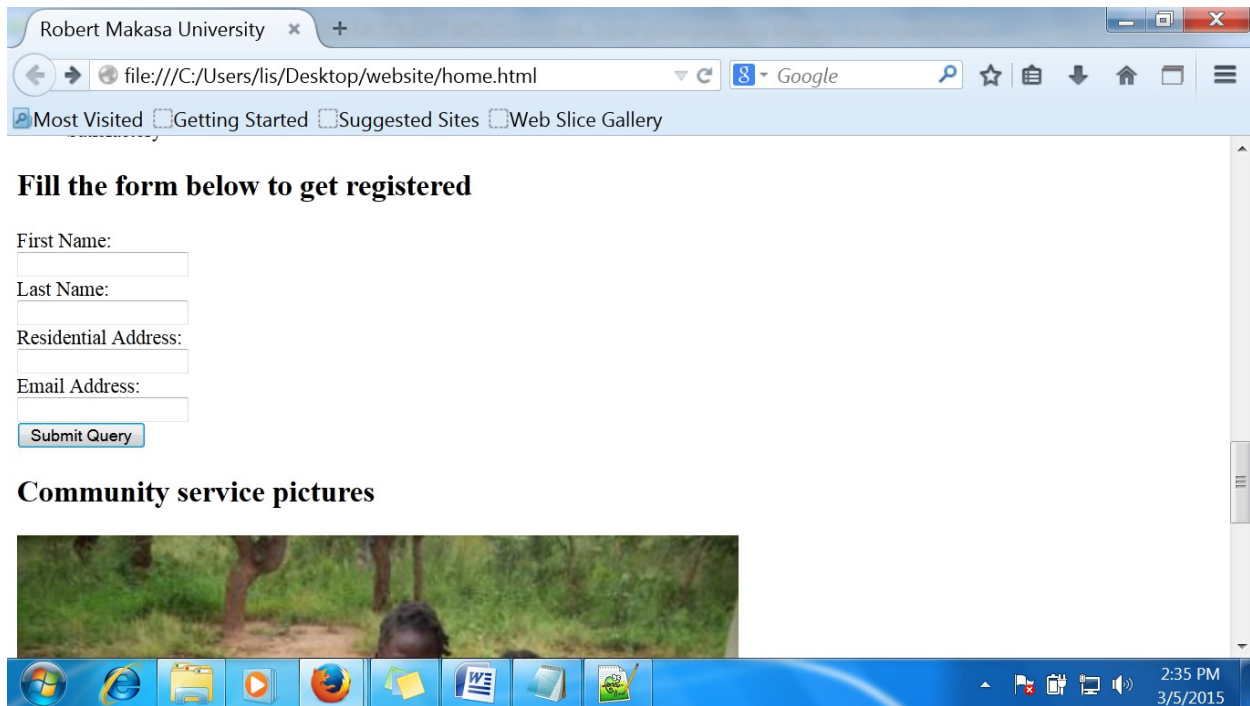


```
72         </dl>
73         <h2> Fill the form below to get registered</h2>
74
75         <form action="form.php" method="POST">
76         First Name:<br />
77         <input type="text" name="firstname"/> <br />
78         Last Name:<br />
79         <input type="text" name="lastname"/><br />
80         Residential Address:<br />
81         <input type="text" name="residentialaddress"/><br />
82         Email Address: <br />
83         <input type="text" name="emailaddress"/> <br />
84         <input type="submit" name="submit"/>
85
86     </form>
87
88
```

Hyper Text Markup Language file length : 3469 lines Ln : 84 Col : 3 Sel : 34 | Dos\Windc UTF-8 w/o EIN: 2:33 PM 3/5/2015

After saving and run, we see that the submit button has been created as shown.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



b) Checkboxes

Let us now continue to create the checkboxes. These are needed when you want the users to check in the boxes.

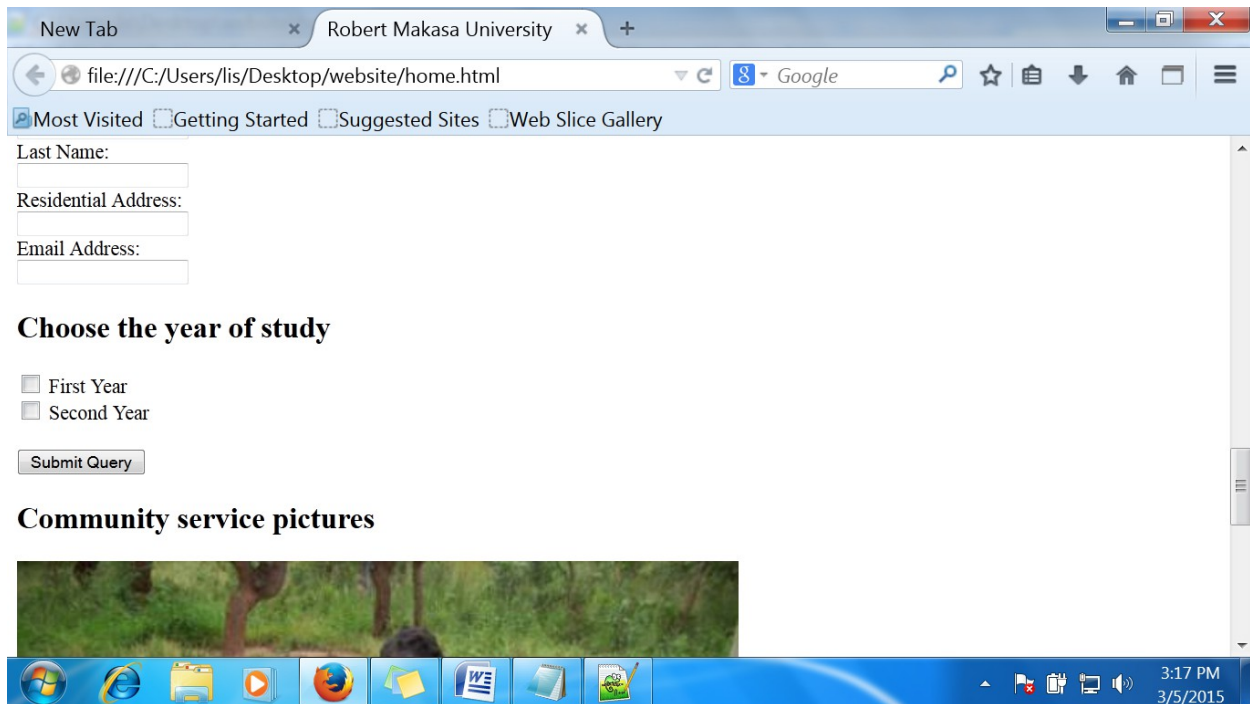
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
*C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
78 Last Name:<br />
79 <input type="text" name="lastname"/><br />
80 Residential Address:<br />
81 <input type="text" name="residentialaddress"/><br />
82 Email Address: <br />
83 <input type="text" name="emailaddress"/> <br />
84 <h2> Choose the year of study</h2>
85
86 <input type="checkbox" name="year_of_study"
87 value="First year"> First Year</input><br/>
88
89 <input type="checkbox" name="year_of_study"
90 value="Second year"> Second Year</input>
91 <br />
92 <br />
93 <input type="submit" name="submit"/>
94 </form>
```

Hyper Text Markup Language file length : 3701 lines Ln : 90 Col : 41 Sel : 17 Dos\Windc UTF-8 w/o BOM

3:18 PM 3/5/2015

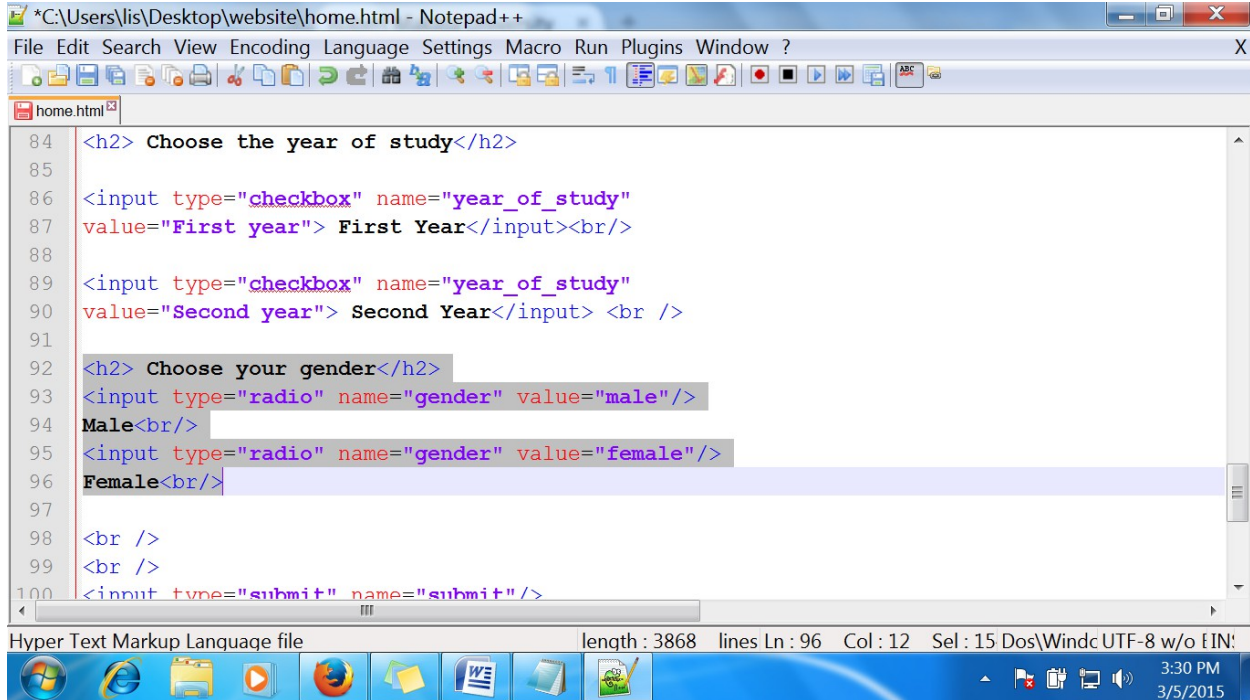
Once you save and run, the check box will be created as shown below.



c) Radio-buttons

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

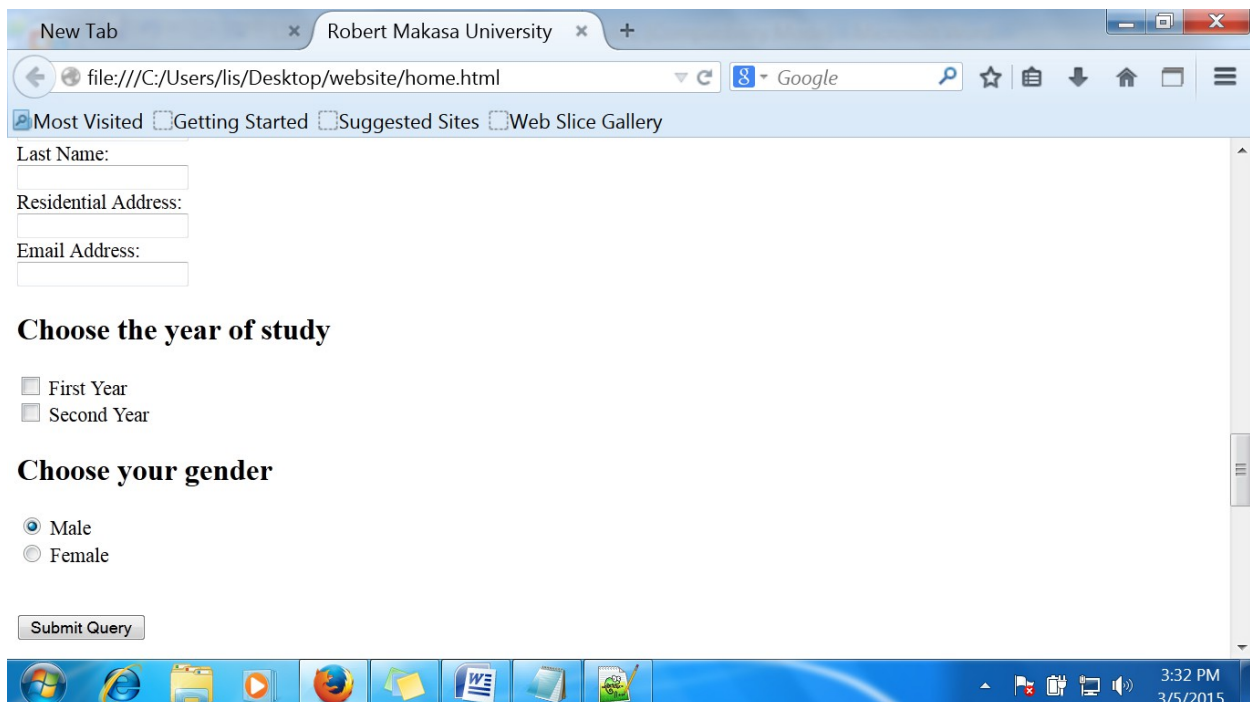
These are similar to check boxes. The user ticks the button that suits their response. Unlike in the check boxes, radio buttons will only allow the user to choose one response.



```
84 <h2> Choose the year of study</h2>
85
86 <input type="checkbox" name="year_of_study"
87 value="First year"> First Year</input><br/>
88
89 <input type="checkbox" name="year_of_study"
90 value="Second year"> Second Year</input> <br />
91
92 <h2> Choose your gender</h2>
93 <input type="radio" name="gender" value="male"/>
94 Male<br/>
95 <input type="radio" name="gender" value="female"/>
96 Female<br/>
97
98 <br />
99 <br />
100 <input type="submit" name="submit"/>
```

Hyper Text Markup Language file length : 3868 lines Ln : 96 Col : 12 Sel : 15 Dos\Windc UTF-8 w/o BOM

Once we save and run we will see that the radio button form is created as depicted below.



Robert Makasa University

file:///C:/Users/lis/Desktop/website/home.html

Most Visited Getting Started Suggested Sites Web Slice Gallery

Last Name:

Residential Address:

Email Address:

Choose the year of study

First Year
 Second Year

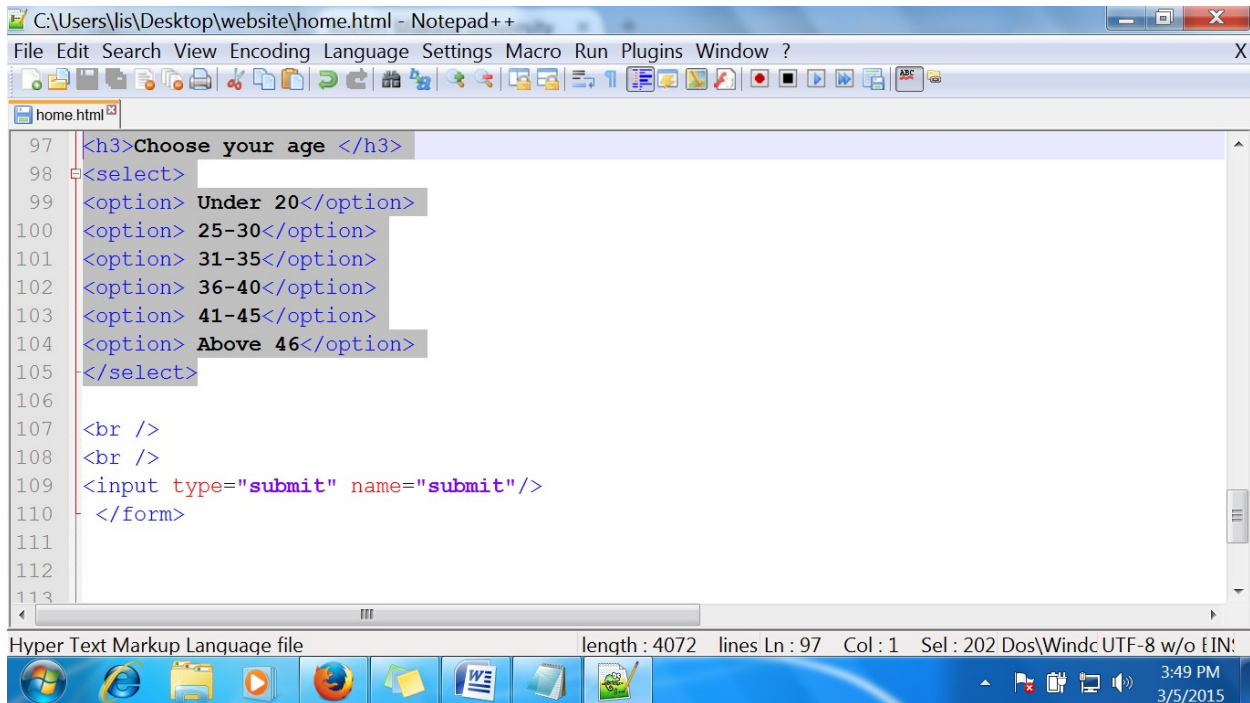
Choose your gender

Male
 Female

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Forms with select options

You may have situations where you want users to select the options that have been provided. To create such forms, we use the select tag which is also nested in the form tag. Let us create the select form.

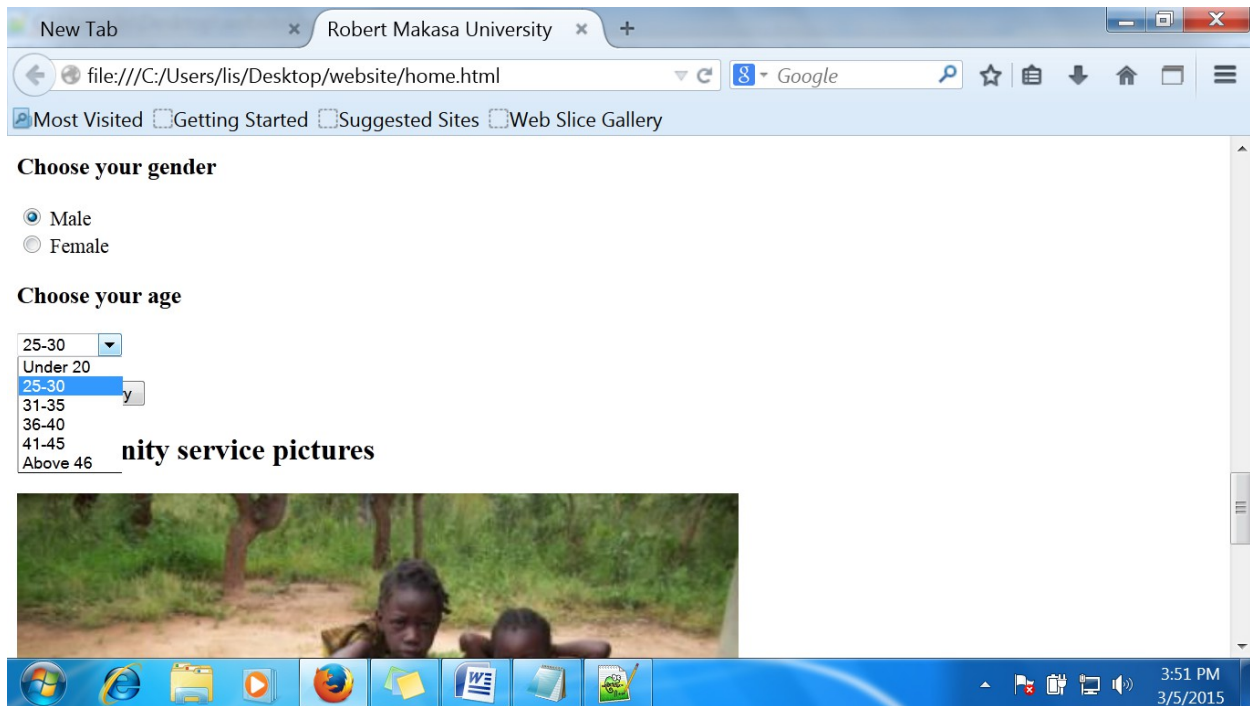
A screenshot of a Notepad++ window showing HTML code for a form. The code is as follows:

```
97 <h3>Choose your age </h3>
98 <select>
99 <option> Under 20</option>
100 <option> 25-30</option>
101 <option> 31-35</option>
102 <option> 36-40</option>
103 <option> 41-45</option>
104 <option> Above 46</option>
105 </select>
106
107 <br />
108 <br />
109 <input type="submit" name="submit" />
110 </form>
111
112
113
```

The status bar at the bottom indicates the file is a Hyper Text Markup Language file, 4072 characters long, with 97 lines. The system tray shows the time as 3:49 PM on 3/5/2015.

Let us save and run the above form and see what we will get. We will see the select form created where users can choose an option.

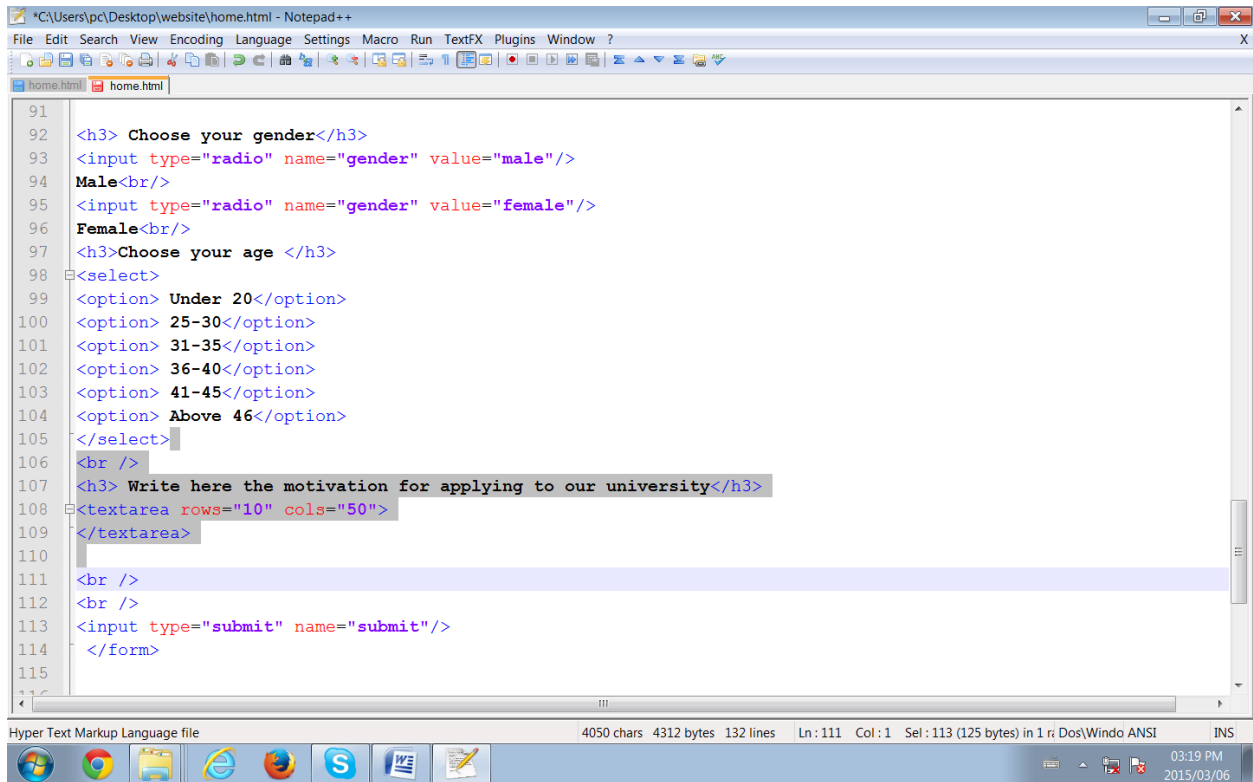
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



☐☐ Text area forms

These are similar to text field forms. But here the user is presented with a large text area where he/she can write freely what he/she wants. These text area forms are important when you want users to write something at length. The tag for the text area is `<textarea>` tag. This is a paired tag that should be nested in the form tags. It has attributes such rows and columns. You can specify the number of rows and columns that you want for the text area. Alternatively, you can just leave these attributes.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



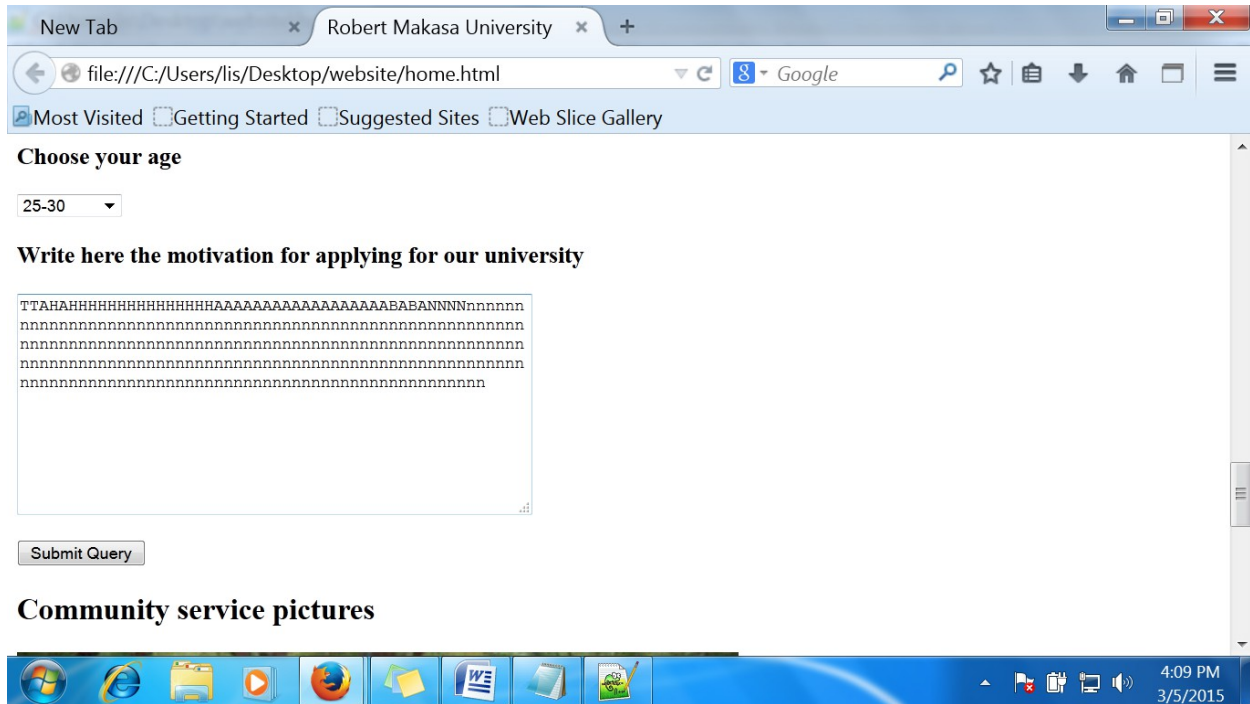
```
91
92 <h3> Choose your gender</h3>
93 <input type="radio" name="gender" value="male"/>
94 Male<br/>
95 <input type="radio" name="gender" value="female"/>
96 Female<br/>
97 <h3>Choose your age </h3>
98 <select>
99 <option> Under 20</option>
100 <option> 25-30</option>
101 <option> 31-35</option>
102 <option> 36-40</option>
103 <option> 41-45</option>
104 <option> Above 46</option>
105 </select>
106 <br />
107 <h3> Write here the motivation for applying to our university</h3>
108 <textarea rows="10" cols="50">
109 </textarea>
110
111 <br />
112 <br />
113 <input type="submit" name="submit"/>
114 </form>
115
```

Hyper Text Markup Language file 4050 chars 4312 bytes 132 lines Ln: 111 Col: 1 Sel: 113 (125 bytes) in 1 r Dos\Windows ANSI INS

03:19 PM 2015/03/06

Once we save and run, we will see that the text area is created with our specifications as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



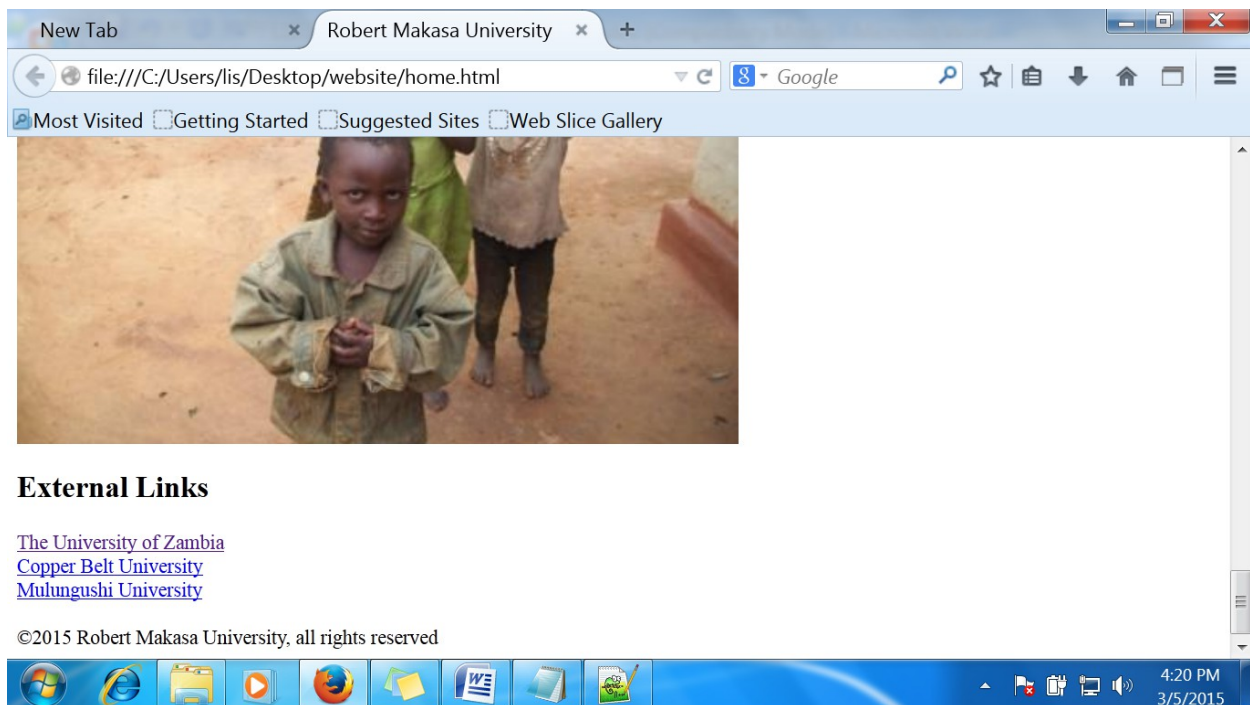
4.4 Footer tag

The footer is the bottom part of a web page. It is where you will find the **copyright** statement. This entails that the copyright tag is nested in the footer tag. **Note** that the footer comes before the closing tags of the body and html. The footer tag is not special but it is used as a container for the copyright tag.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

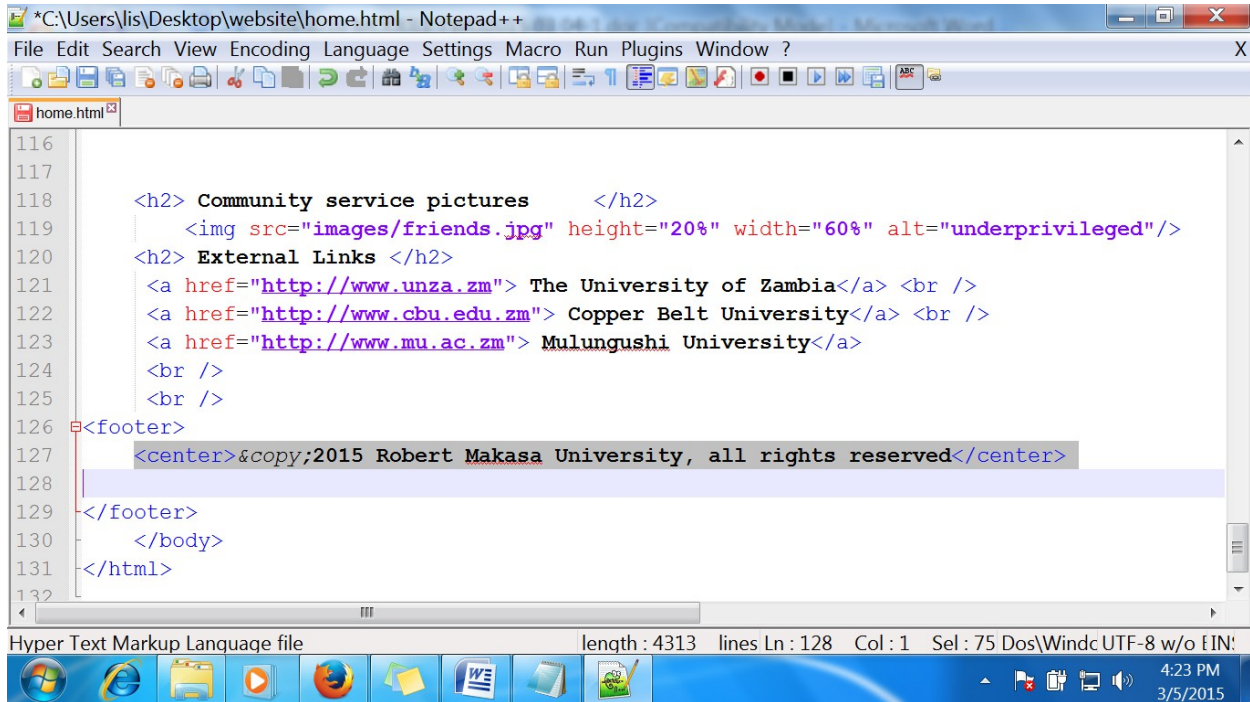
```
C:\Users\lis\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
home.html
116
117
118     <h2> Community service pictures     </h2>
119     
120
121     <h2> External Links </h2>
122     <a href="http://www.unza.zm"> The University of Zambia</a> <br />
123     <a href="http://www.cbu.edu.zm"> Copper Belt University</a> <br />
124     <a href="http://www.mu.ac.zm"> Mulungushi University</a>
125     <br />
126     <footer>
127     &copy;2015 Robert Makasa University, all rights reserved
128
129 </footer>
130 </body>
131 </html>
132
Hyper Text Markup Language file      length: 4296  lines Ln : 129  Col : 10  Sel : 7  Dos\Windc UTF-8 w/o BOM
4:19 PM 3/5/2015
```

When we save and run we will see that the copyright year and rights displayed. Master the symbols use to create the copyright statement.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Well the copyright statement is shown but it is not centered. You can center the copyright statement using the center tag `<center>`. So let us center the copyright statement as shown below.

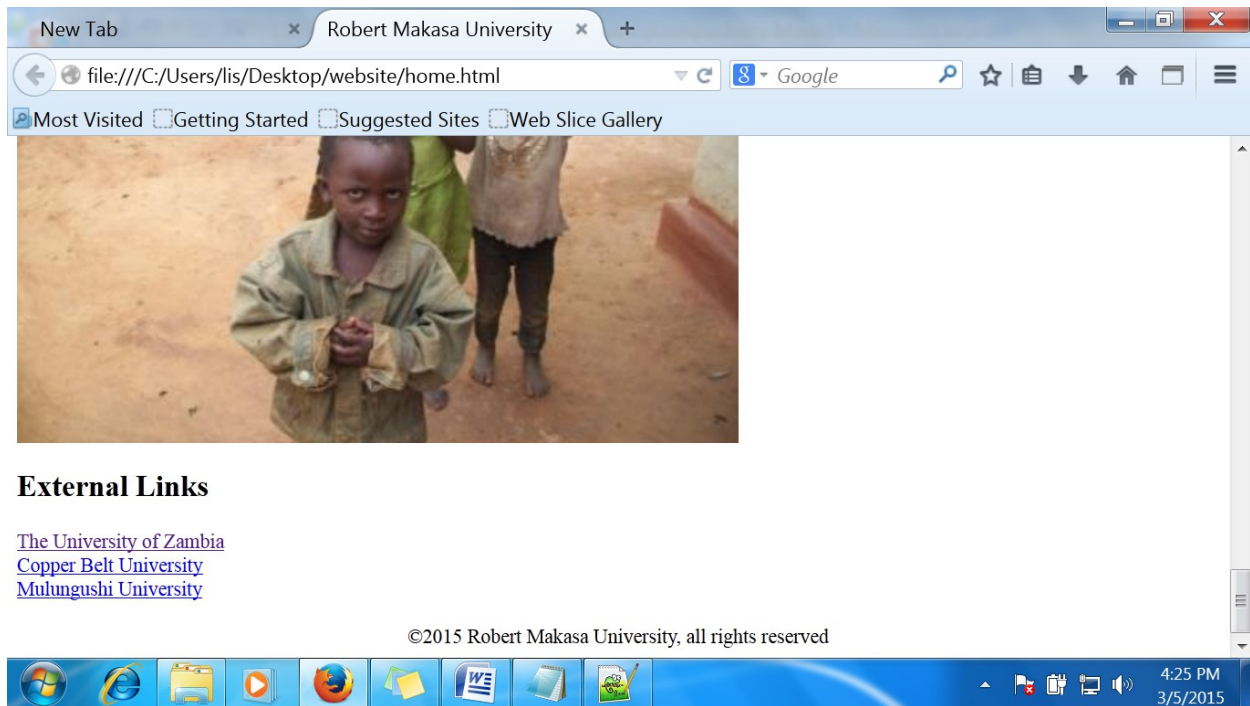


```
116
117
118     <h2> Community service pictures     </h2>
119     
120
121     <h2> External Links </h2>
122     <a href="http://www.unza.zm"> The University of Zambia</a> <br />
123     <a href="http://www.cbu.edu.zm"> Copper Belt University</a> <br />
124     <a href="http://www.mu.ac.zm"> Mulungushi University</a>
125     <br />
126     <br />
127     <center>&copy;2015 Robert Makasa University, all rights reserved</center>
128
129 </footer>
130 </body>
131 </html>
132
```

Hyper Text Markup Language file length : 4313 lines Ln : 128 Col : 1 Sel : 75 Dos\Windc UTF-8 w/o EIN: 4:23 PM 3/5/2015

Let us save and run to see if the copyright statement is centered.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



4.5 Division tag

Division tags as the name suggests are created to divide the web page into parts. This is needed if you want to apply Cascading Style Sheets (CSS). The tag for the division tag is `<div>`. This is a paired tag. This division tag has attributes and values. Among the commonly used attributes are **id** and **class**. The difference between the two is that the id (identifier) attribute can only be used once a web document while the class attribute can be used many times in a web document. The values for these attributes could be a name of a portion of a web page such as main menu, top menu, body, footer etc.

Note that the division tags should nest the portion of the web page that you want to stand as a section on its own. For example if you want the main menu to be a division, nest the main menu with the division tag as demonstrated below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
*C:\Users\pc\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html home.html
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9      <br />
10    <br />
11
12
13    <div id="topmenu">
14      <a href="second.html"> Second Page</a> |
15      <a href="third.html"> Third Page</a> |
16      <a href="fourth.html"> Fourth Page</a> |
17      <a href="fifth.html"> Fifth Page</a>
18    </div>
19
20    <br />
21    <br />
22    <table border="1" width="20%">
Hyper Text Markup Language file 4079 chars 4349 bytes 136 lines Ln: 18 Col: 11 Sel: 183 (195 bytes) in 1 r Dos/Windows ANSI INS
03:59 PM 2015/03/06
```

Note that other attributes of div could be **align** and values could be **left**, **center** and **right** if you want to reposition the division contents. Let us now divide our web page as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
*C:\Users\pc\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html home.html
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7   </head>
8   <body>
9     <div class="logo">
10       <br />
11    </div>
12    <br />
13    <br />
14
15    <div id="topmenu">
16      <a href="second.html"> Second Page</a> |
17      <a href="third.html"> Third Page</a> |
18      <a href="fourth.html"> Fourth Page</a> |
19      <a href="fifth.html"> Fifth Page</a> |
20    </div>
21
22    <br />
23    <br />
24
25    <div class="mainmenu">
26      <table border="1" width="20%">
27        <caption> <h2>Main Menu</h2></caption>
28        <tr align="center">
29          <td> <a href="second.html"> Second page</a></td></center>
30        <tr align="center">
31          <td> <a href="third.html">Third Page</td>

```

Hyper Text Markup Language file 4226 chars 4516 bytes 146 lines Ln: 30 Col: 27 Sel: 540 (584 bytes) in 1 r Dos/Windows ANSI INS 04:22 PM 2015/03/06

```
*C:\Users\pc\Desktop\website\home.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html home.html
112 <option> 41-45</option>
113 <option> Above 46</option>
114 </select>
115 <br />
116 <h3> Write here the motivation for applying to our university</h3>
117 <textarea rows="10" cols="50">
118 </textarea>
119
120 <br />
121 <br />
122 <input type="submit" name="submit"/>
123 </form>
124 </div>
125
126 <div class="images">
127   
128 </div>
129
130
131
132
133
134
135
136
137
138 <div class="footer">
139
140 <footer>
141   <center>©copy;2015 Robert Makasa University, all rights reserved</center>
142 </footer>
143 </div>
144
145 </div>
146 </body>
147 </html>
148

```

Hyper Text Markup Language file 4236 chars 4530 bytes 148 lines Ln: 148 Col: 1 Sel: 525 (569 bytes) in 1 r Dos/Windows ANSI INS 04:27 PM 2015/03/06

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

As alluded to, these divisions created are nothing but useful when we begin decorating our website using CSS.



Summary

In unit four we have learnt how to create tables using the table tag `<table>`. We learnt that these tables are useful in organizing the web page contents and more importantly are used to create menus. Further, we learnt how to create the forms using the form tag `<form>`. On the forms we learnt that these are essential to websites that are created for e-commerce and learning institutions where users are required to submit their details to the web database application. In addition, we learnt how to create the copyright statement in the footer of a web page using this symbol below.

© year name of the institution, all rights reserved.

Lastly but not the least, we have learnt how to create divisions in a web page using the division tag `<div>`. We learnt that this division tag could have the attribute **id** or **class**. The values could be the name of part of the web page that you want to create as a division such as top menu, main menu and footer. On the same subject, we learnt that the id attribute is used once in the web page while the class attribute can be used several times in the same web page. It was also learnt that the division tag is useful when decorating the web pages using CSS.



Activity

1. Create the table and forms in your web page
2. Create divisions of your web page.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Unit 5: Introduction to Cascading Style Sheets (CSS)

Introduction

Unit five introduces you to Cascading Style Sheets (CSS); the complimentary language to XHTML which is used to transform the outlook of web pages. It is used to decorate and create the graphical outlook of the web page that is appealing to the users. CSS is designed to decorate the web pages but not to create its contents. This is the underlying difference between CSS and XHTML.

Aims

This unit aims at introducing to the basic properties and values of CSS used in design the graphical outlook of a web page.

Objectives

At the end of this unit, you should be able to do the following:

- Know various ways of linking CSS to XHTML page
- Use various CSS properties and values to transform the outlook the web page

Resources

As indicated in the previous units, you need a computer with at least two web browsers installed on it (*Internet explorer* and *Fire Fox*). It should also have a web editor called Note pad+++. Check if your computer has the above mentioned tools. If does not have, download and install them on your computer.

Addition Resources

You need books and other information resources that deal with website designing using CSS.

Below are some of the books that can supplement this module:

Castro, E (2003). *HTML for the World Wide Web: with XHTML and CSS*. 5th Ed. Berkeley: Pearson Education

Deitel.P.J and Deitel.H.M (2009). *Internet & World Wide Web: How to Program*. New York: Pearson Educational International

Deitel.P.J and Deitel.H.M (2003). *C++: How to Program*. 4th Ed. New York: Pearson Educational International

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Lavanya, L (2011). *HTML 5: Magic wand for Web Designing*. Chennai: Ane Books Pvt Ltd.

Musciano, C and Kennedy, B (2007). *HTML & XHTML: The Definitive Guide*. Chennai: Shroff Publishers & Distributors PVT.LTD

Schultz, D and Cook, C (2007). *Beginning HTML with CSS and XHTML: Modern Guide and Reference*. New York: Press



Time Frame

You need **two** weeks to finish this unit.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Introduction

In the quest by the World Wide Web Consortium (W3C) to separate the creation of contents from the graphical outlook of an XHTML page gave birth to the Cascading Style Sheets (CSS) in 1996. It emerged five years after the birth of the Web. The first release of CSS was version 1. CSS has evolved and today we have version 5. As alluded to in the introduction, the principal objective of developing CSS was to ensure that web content creation is separated from permeation (graphical outlook). The W3C decided to leave contents creation with HTML, XHTML etc while the presentation; the way the web page looks with CSS. Prior to this bold move by the W3C, web contents and presentation were done in HTML. This entailed that the webmaster will write the tag and prescribes in the opening tag of such a tag how it should be presented to the users by the browser as shown below.

```
<body bgcolor= "yellow" font-size= "14">
```

Contents here

```
</body>
```

In this example, the webmaster creates the content using the body tag and tells the browser the background color and font size to use when displaying this page to the users. This practice was deemed to be dirty and created challenges for the web masters to correct mistakes in the tags and presentations as the contents and presentation were mixed.

Note: Some webmasters still mix contents and presentation which is being discouraged by the W3C.

Ways in which to link CSS to XHTML page

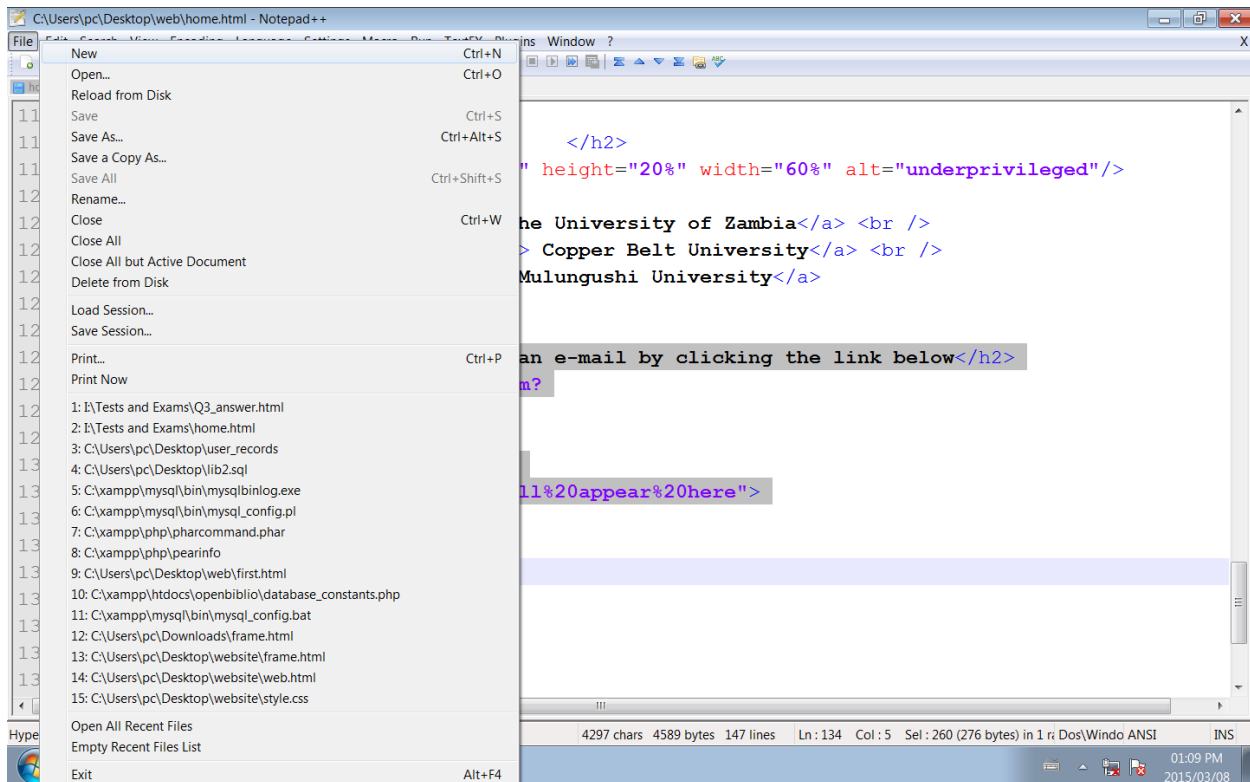
There are basically four ways of adding CSS to XHTML web page (file). These are external, embedded, imported and inline.

a) External method

This method involves creating a separate CSS file and links it to the XHTML page one wants to decorate. This CSS file should be linked in the head section a web page to be decorated. To begin with, one needs to create an empty CSS in Notepad++ and save it in the working environment where XHTML pages/ files are saved.

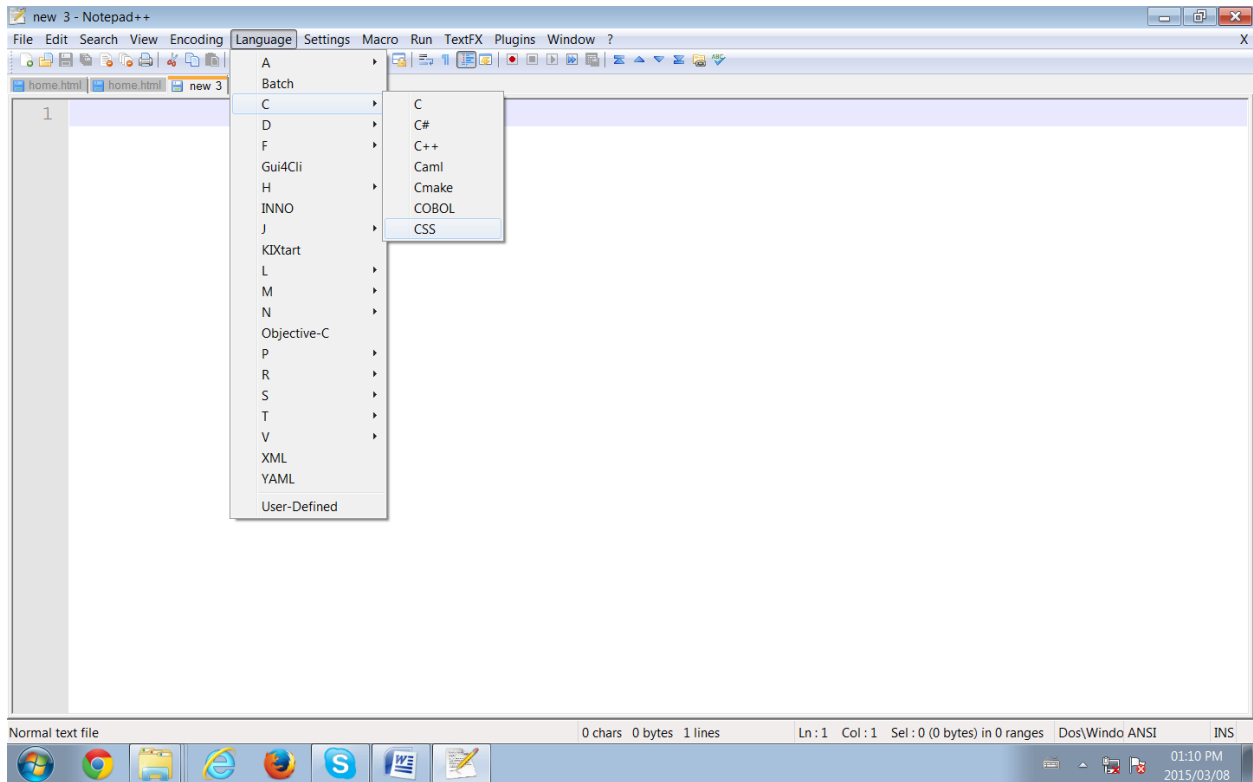
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

To create this empty CSS go to your Notepad++, Click on **File**, then on **New**. You see a blank page.

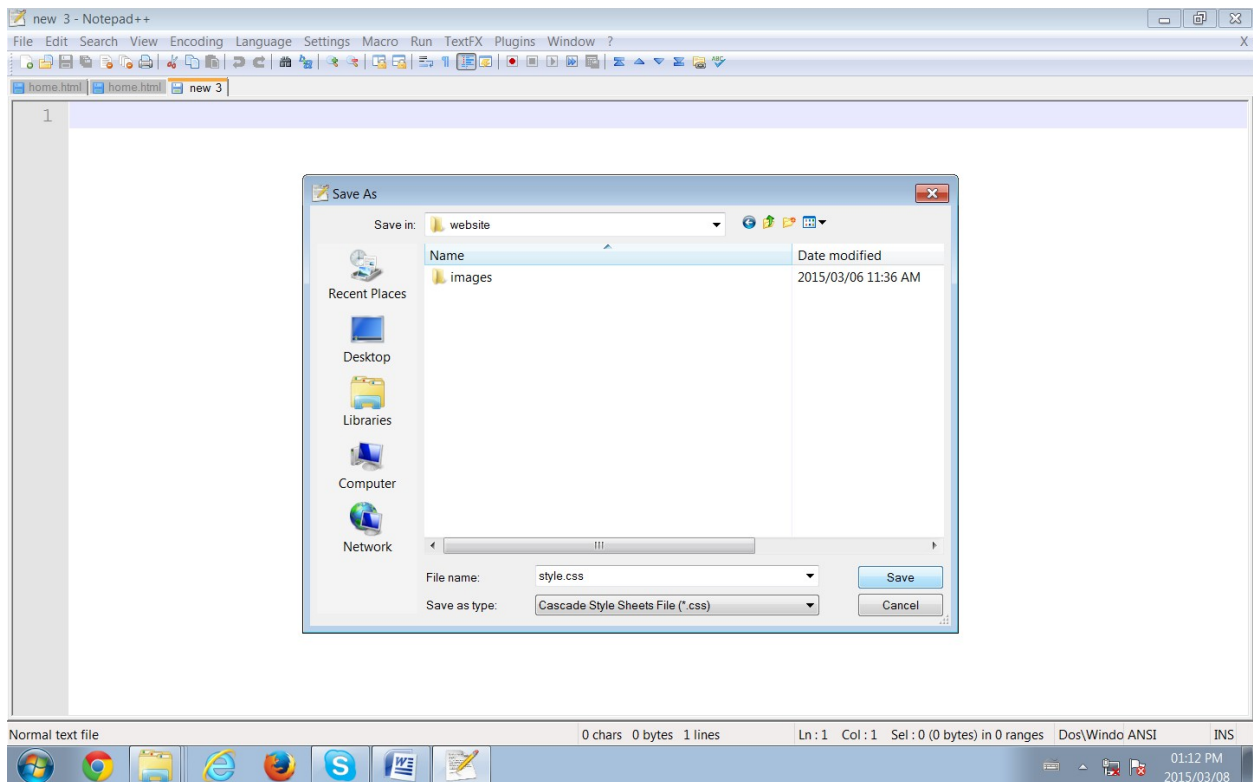


Then to change this blank page into CSS, Click on **Language** in Notepad++ window, then click on **C** and then choose **CSS**. The blank page will be changed to a blank CSS.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

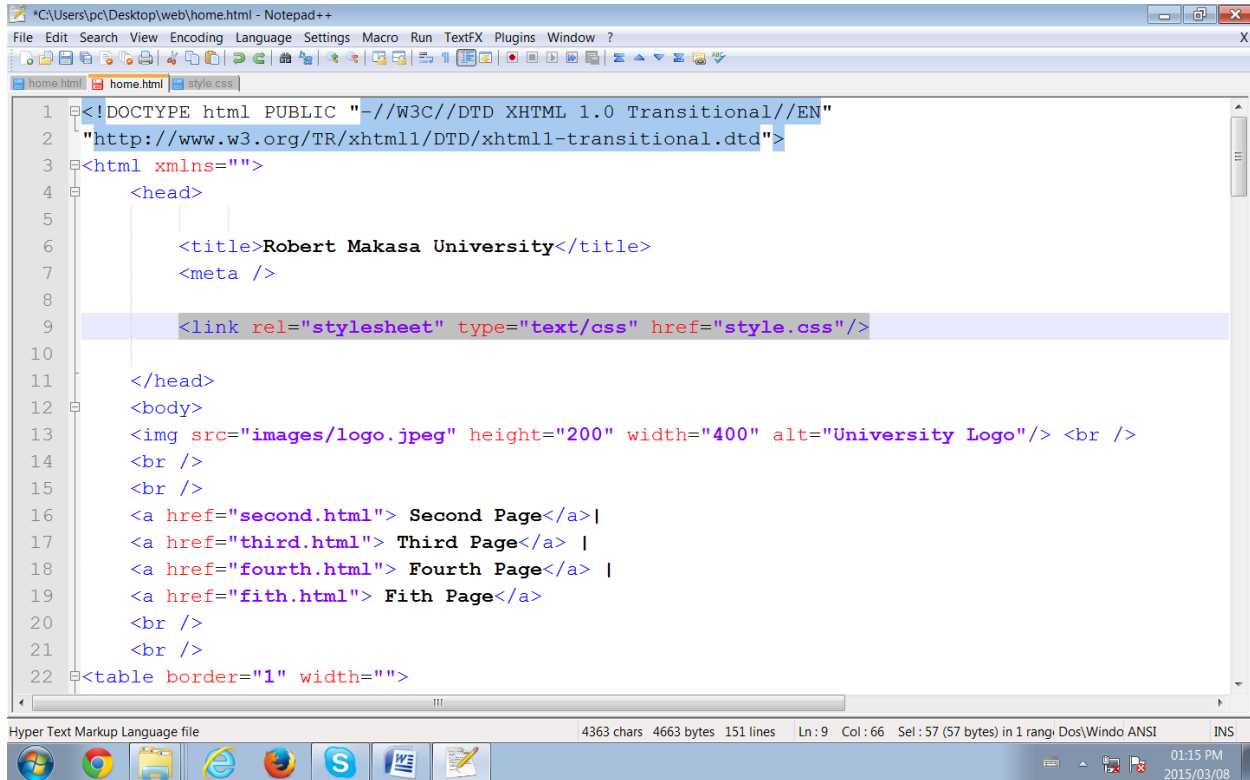


Thereafter save the blank CSS in the working folder as **style.css** as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Having created a blank CSS, we can now go to the XHTML page that we want to decorate and create a link to our external CSS called **style.css** as shown below.

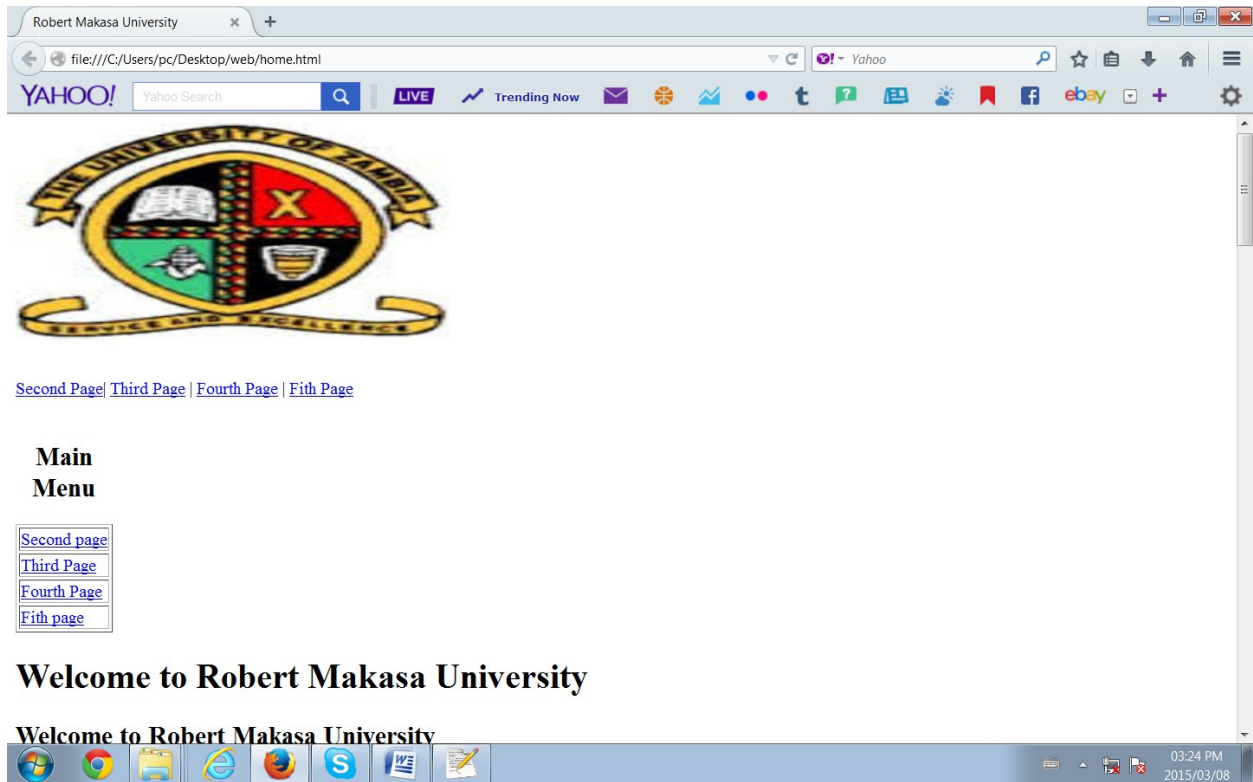


```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5
6     <title>Robert Makasa University</title>
7     <meta />
8
9     <link rel="stylesheet" type="text/css" href="style.css"/>
10
11   </head>
12   <body>
13      <br />
14     <br />
15     <br />
16     <a href="second.html"> Second Page</a> |
17     <a href="third.html"> Third Page</a> |
18     <a href="fourth.html"> Fourth Page</a> |
19     <a href="fifth.html"> Fith Page</a>
20     <br />
21     <br />
22   <table border="1" width="">
```

As you can see in the head section of our XHTML web page, you can see that the link to CSS is created. This link does not use the tag **<a>**. Instead, it uses the tag **<link />** and that this link tag is standalone tag. The link tag **<link />** has attributes and their values. The first attribute is **rel** stands for relative link and its value is **stylesheet**. The explanation is thane we are creating a relative link to XHTML web page which is called stylesheet. The second attribute is **type** tells us the type of as tylesheet that we want to create. In this case is text and css; meaning that the stylesheet will have some text and CSS. That is the reason the vale for attribute type is text/css. The last attribute in this link is the **href**; whose value is the actual name of CSS.

Can we save and try to run if we will see some changes to our XHTML web page.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

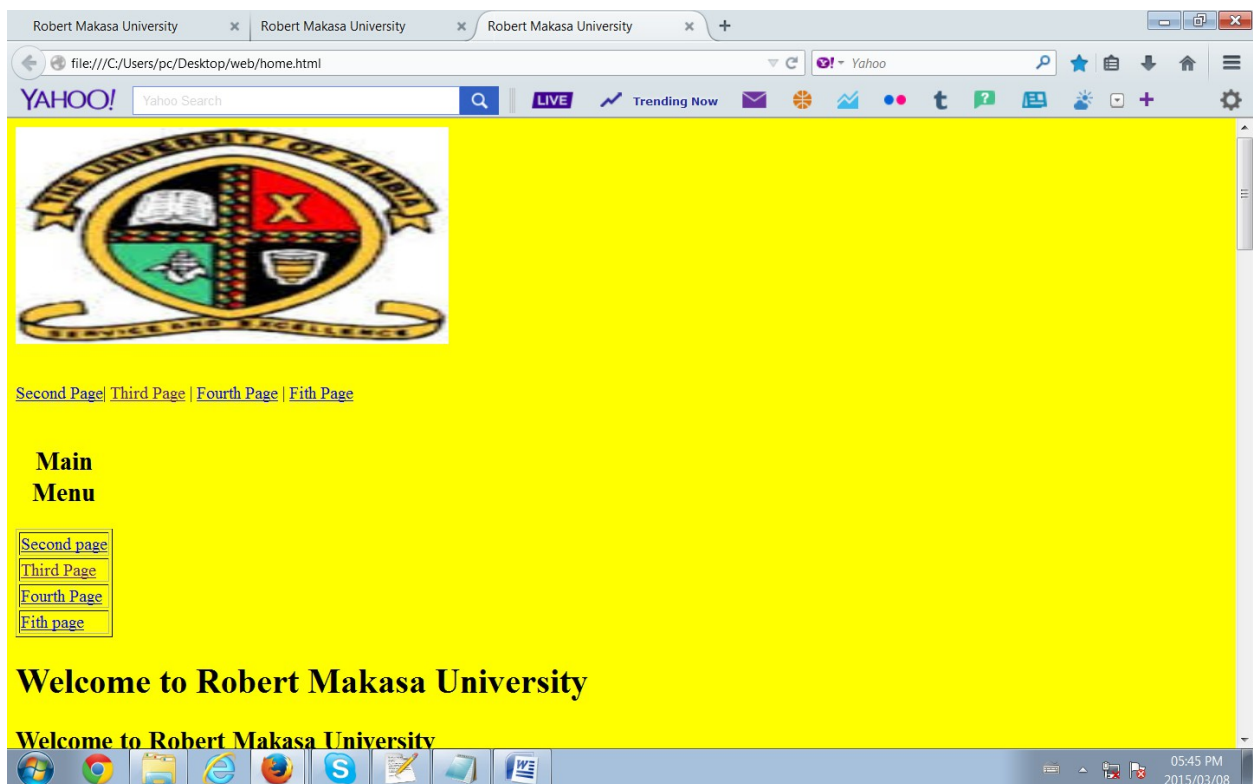


As you can see above, nothing has changed after linking this XHTML page to our external CSS. This is because it is still blank. We have not yet put in CSS. Now let go back to our blank CSS file and put some contents as shown below:

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
C:\Users\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html home.html style.css
1 body
2 {
3 background-color:yellow;
4 }
Cascade Style Sheets File 30 chars 36 bytes 4 lines Ln : 4 Col : 2 Sel : 0 (0 bytes) in 0 ranges Dos\Windo ANSI INS
05:43 PM 2015/03/08
```

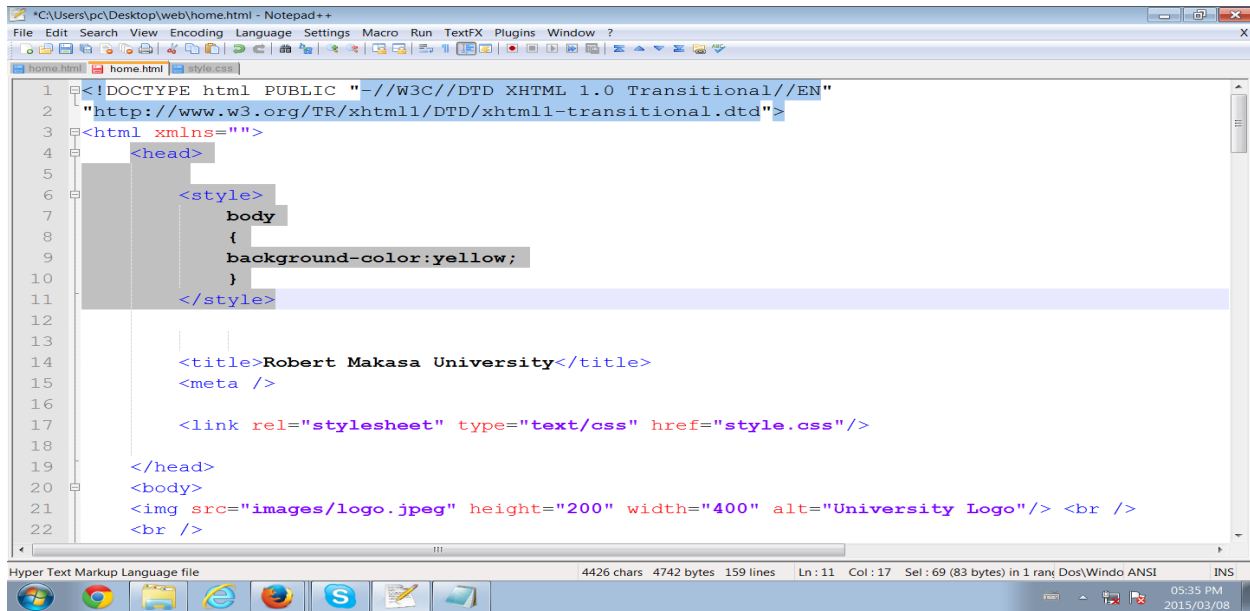
Once we type the above CSS inn CSS file, let us save and run. We will that the background color for the body of our web page is changed to yellow as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

b) Embedded method

Under this method, you put (embed) CSS in the head section of an XHTML that we want to decorate as shown below.

A screenshot of a Notepad++ window showing an HTML file named 'home.html'. The code is as follows:

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <style>
6       body
7       {
8         background-color:yellow;
9       }
10    </style>
11
12
13
14    <title>Robert Makasa University</title>
15    <meta />
16
17    <link rel="stylesheet" type="text/css" href="style.css"/>
18
19  </head>
20  <body>
21     <br />
22  </body>
```

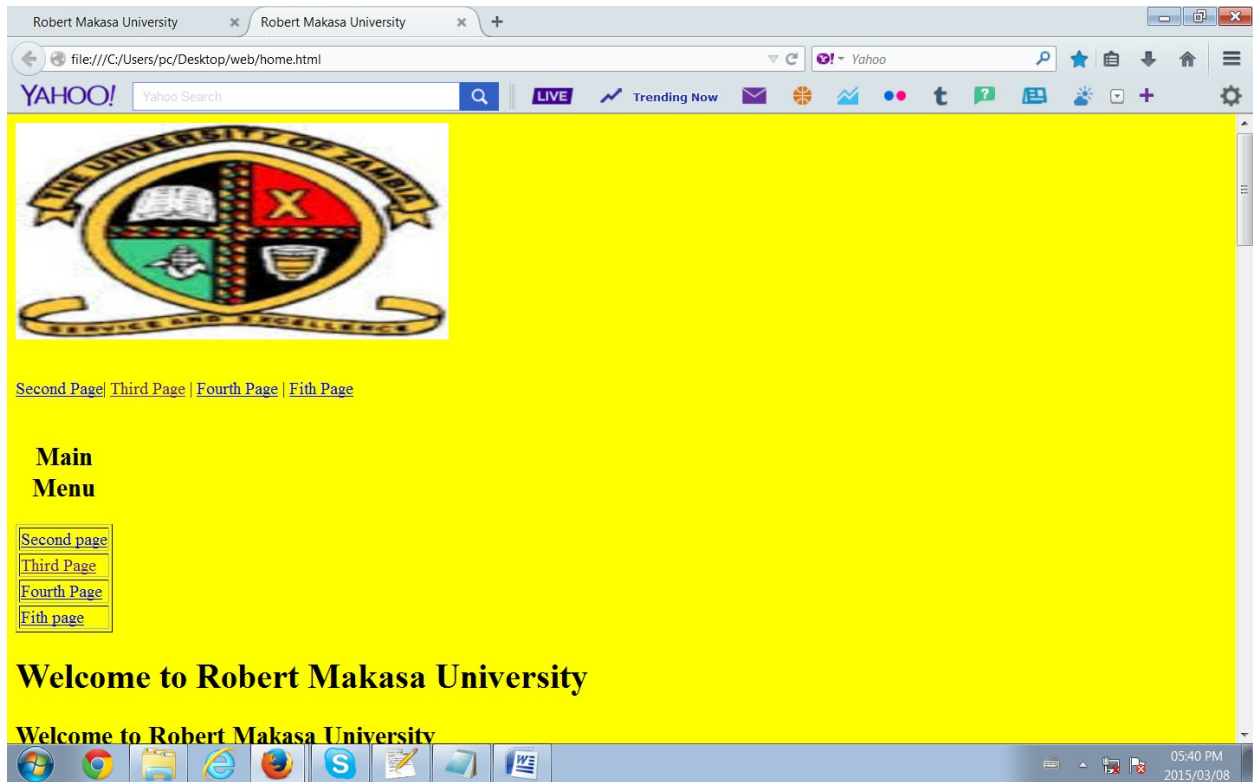
The status bar at the bottom indicates 'Hyper Text Markup Language file', '4426 chars 4742 bytes 159 lines Ln : 11 Col : 17 Sel : 69 (83 bytes) in 1 ranx Dos\Windo ANSI INS', and the system clock shows '05:35 PM 2015/03/08'.

In this screen shot above, CSS is put between the opening and closing tags called style `<style>`.

The above CSS tells the browser to display the XHTML page with a background color yellow.

Try to imbed this CSS into your web page, save and run. You surely see that the background color of the body of the web page becomes yellow as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

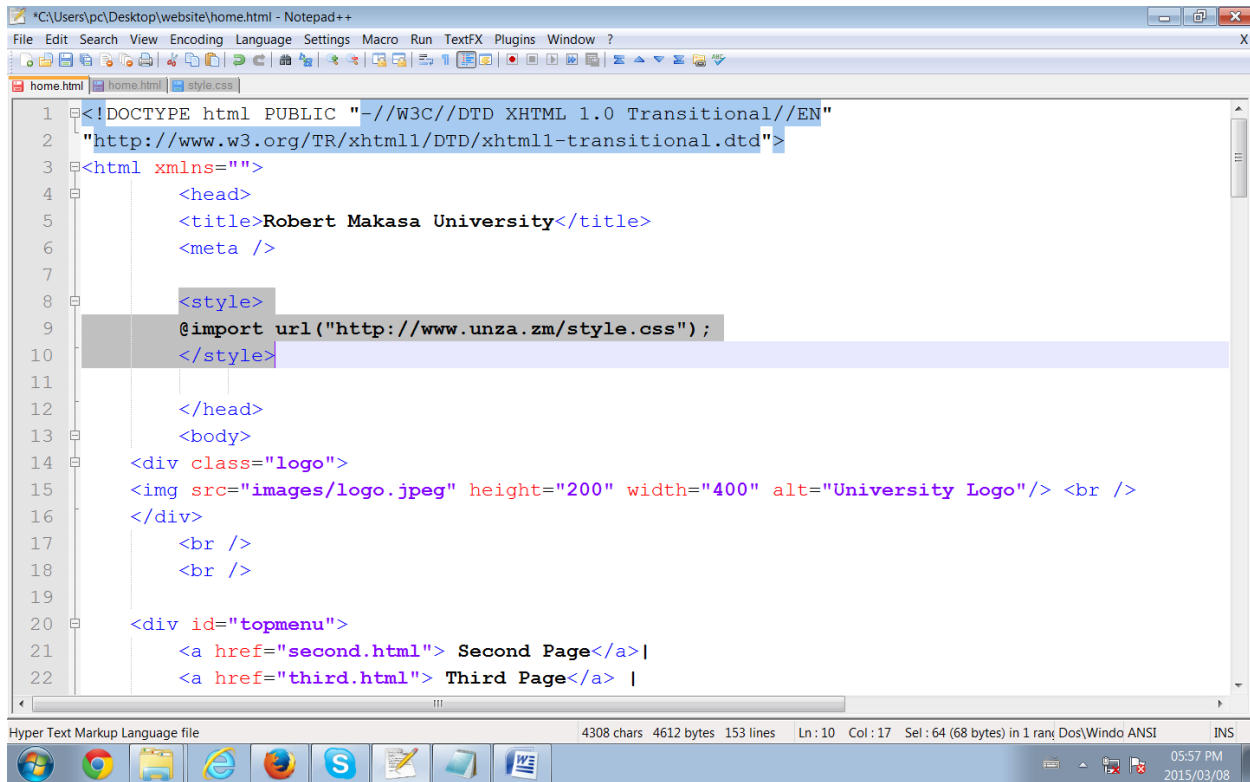


c) Imported method

As the name suggests, this involves linking a web page to a CSS that is elsewhere on the machine on the Internet. It implies using a CSS file of another organization that is on the Internet. For this to work, your machine should be equally connected to the Internet. For example, if I like the CSS for the University of Zambia website, I can use it in my website. What I need to do is to connect to the UNZA CSS using its url. Note that this is not a reliable way of doing things in the sense that if the url for UNZA CSS is changed, my website will remain without CSS.

As per practice, the url for the CSS you are importing should be put between the opening and closing tags of the head as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



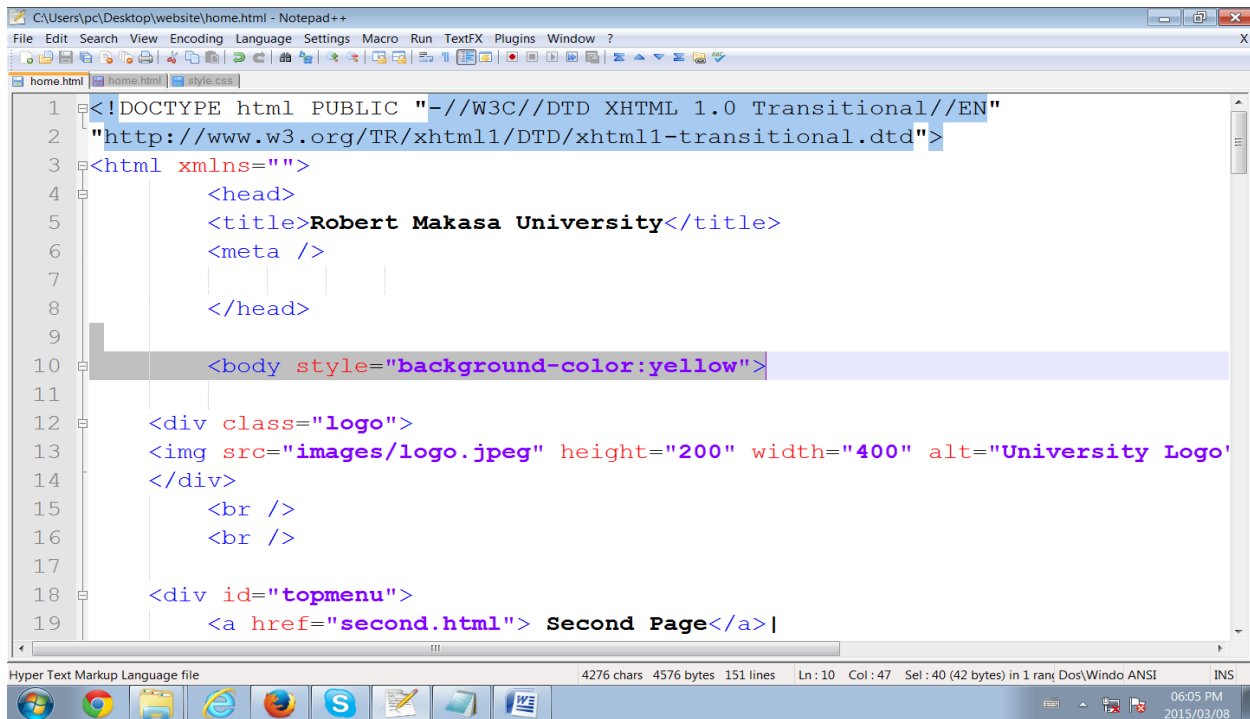
```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7
8     <style>
9       @import url("http://www.unza.zm/style.css");
10    </style>
11
12   </head>
13   <body>
14     <div class="logo">
15        <br />
16     </div>
17     <br />
18     <br />
19
20     <div id="topmenu">
21       <a href="second.html"> Second Page</a> |
22       <a href="third.html"> Third Page</a> |
```

Look at the way the link above is done. You nest the import link between the style tags. The link begins with @ symbol and the url for the CSS file you are importing is put in brackets and it is in double quotes. The CSS link finally ends with a semi-colon.

d) Inline method

With the inline method, the CSS is declared in each and every tag in the XHTML web page as shown in the example below.

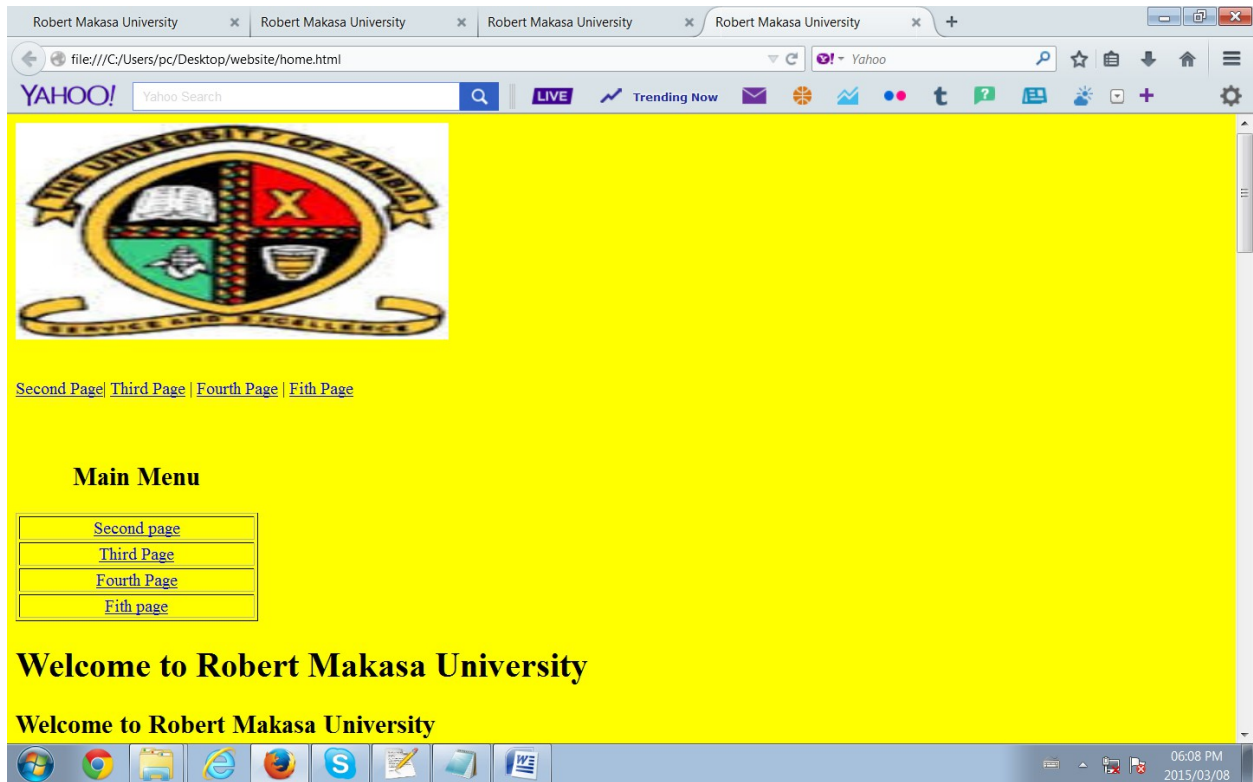
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="">
4   <head>
5     <title>Robert Makasa University</title>
6     <meta />
7
8   </head>
9
10  <body style="background-color:yellow">
11
12    <div class="logo">
13      
15    <br />
16    <br />
17
18    <div id="topmenu">
19      <a href="second.html"> Second Page</a> |
```

AS you can see in the screen shot above, the body tag has an attribute style which carries the properties and values of CSS in double quotes. Once you save and run, you will see that indeed the background color for the tag body is yellow as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Let quickly advice you not to us the last method as it is very dirty way of doing things. The most recommended and smarter way of doing things is to use the first method. Even in this module, we will be using the first method; using the external CSS file.

☐☐☐ Concept of style inheritance

According to Devi, Ramya and Sivaranjani (2013) inheritance in CSS is based on the hierarchical (tree) structure of the document. In this regard, if style for a tag which is said to a child of another tag is not specified, the child tag takes (uses) the style (CSS) option of the parent tag. For example, the paragraph or heading tags do not have their own style, but the body tag (which is the mother of these two tags) has style, by default, the paragraph and heading tags will be decorated using the style of the body.

5.4 CSS Selectors, properties and values

Like you have seen in the above examples where we have applied some of CSS, we have been firstly declaring the tag that we want to apply CSS to, and then we bring in the properties and values of CSS. In this regard, the **tag name** where we want to apply CSS to is the **selector**. The idea with CSS is that you need first to select the tag to which to apply CSS and that the declared

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

tag will be called the selector. In the first CSS example we saw above, the tag selected or declared was the body tag and we applied CSS to it.

Having selected the tag, you need to bring in the CSS properties. According to Chuck and Billy (2011), the standard collects these properties into **six** groups namely; **fonts, colors and backgrounds, text, boxes and layouts, lists, and tag** classification. These are the properties of CSS that you need to declare after declaring the tag to decorate. In the above example, the property background color was declared.

As learnt in XHTML, any property has the value. Similarly, CSS properties have values. There are eight CSS values; namely **keywords, length values, percentage values, URLs, colors, angles, time, and frequencies**. In the above examples, we used the value color (**yellow**) to decorate the body tag of the web page.

Now, you have seen that the selector, property and value of CSS in the above examples were separated by some symbols. To start with, once we declare the selector (tag to be decorated), CSS demands to introduce the opening caret bracket (**{**), thereafter bring in the property and immediately put a colon (**:**) in front of the property and type the value. Thereafter type the semi-colon (**;**) and proceed to type the closing caret bracket as shown below.

```
body {background-color: yellow;}
```

This is perfect okay but for the sake of readability and debugging, we advise you to create spaces between the selector, the caret brackets and properties and their values as shown below.

```
body  
{  
background-color: yellow;  
}
```

Note that you can declare multiple selectors (tags) and you can specify several properties and values to them at once as shown below.

```
h1, h2, h3, h4, h5, h6  
{  
color: red;  
background-color:yellow;  
font-size:16pt;
```

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

}

In the above example, the different selectors are separated from each other by a comma. Without a comma, you will not get the desired results.

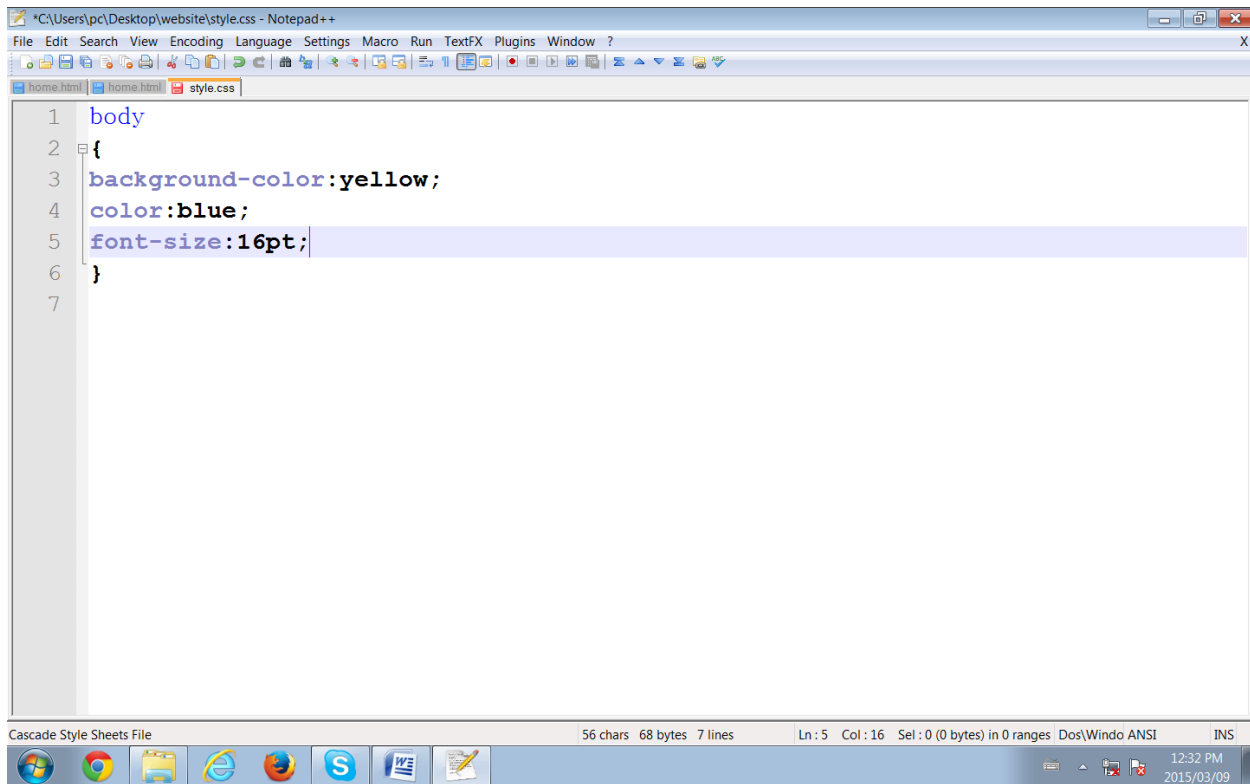
5.4 Application of some CSS properties and values

I will now show you how to use some CSS properties and values to change the outlook of your web pages. I am sorry; we are not going to finish all the CSS properties and values in this module. This is just an introduction. Find time to read more on CSS.\

i. Font , colors, backgrounds properties and values

In CSS we have mainly three font properties namely; font-size, font-weight and font-family. Font-size is used to state the size of our text in our web page and one can set the values as they wish. The values used are mostly in points (e.g. 14pt). Font-size can also have values such as percentage (%), medium and large.

Let us try to use the font-size. Let us go to our external CSS file and open it in Notepad++.

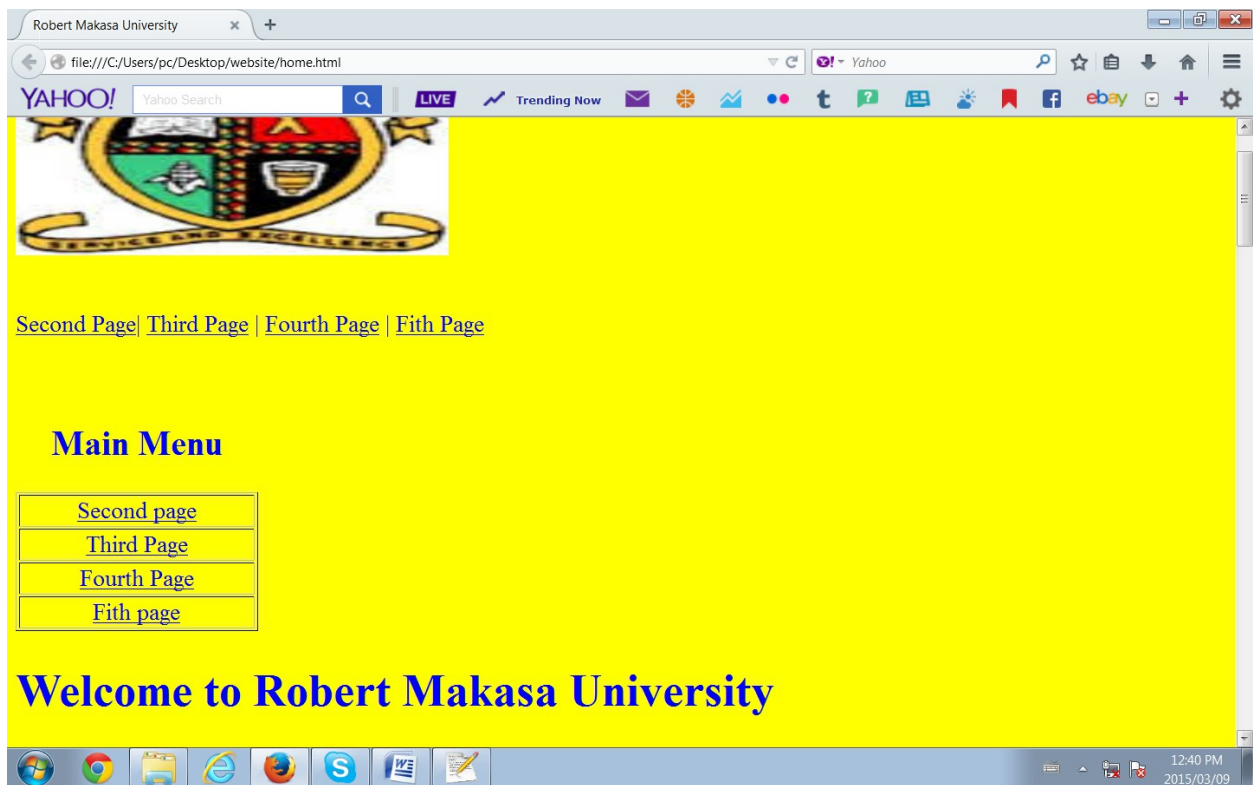
A screenshot of the Notepad++ application window. The title bar reads '*C:\Users\pc\Desktop\website\style.css - Notepad++'. The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Macro, Run, TextFX, Plugins, Window, and ?. The toolbar contains various icons for file operations and editing. The main text area shows the following CSS code:

```
1 body
2 {
3 background-color:yellow;
4 color:blue;
5 font-size:16pt;
6 }
7
```

The line 'font-size:16pt;' is highlighted in light blue. The status bar at the bottom indicates 'Cascade Style Sheets File', '56 chars 68 bytes 7 lines', 'Ln : 5 Col : 16 Sel : 0 (0 bytes) in 0 ranges', 'Dos\Windo ANSI', and 'INS'. The Windows taskbar at the very bottom shows icons for Internet Explorer, Google Chrome, File Explorer, and other applications, along with the system clock showing '12:32 PM 2015/03/09'.

Once we save the CSS file and we open our XHTML home page where we have linked this CSS and run it, we will see that these changes have been effected to our web page as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



You see that the font size is 16 (big) and the text color is indeed blue. The back ground color is yellow.

Before, I go away from colors, let me show you how to create millions of colors using *hexadecimal principles*.

- **Hexadecimal principles**

Under hexadecimal principles, you can create colors by combing numbers from 0 to 9 and letters of the alphabet from A to F. The combination of these letters and numbers should not go beyond six. The combination which less than six number and letters works but more than six, does not work. Note that you exclusively use numbers or letters to create colors but make sure that total of these numbers or letters does not go beyond six letters or numbers. And it is practice that all hexadecimal colors bear the harsh tag (#) in front as shown below.

#00ffa1

#233115

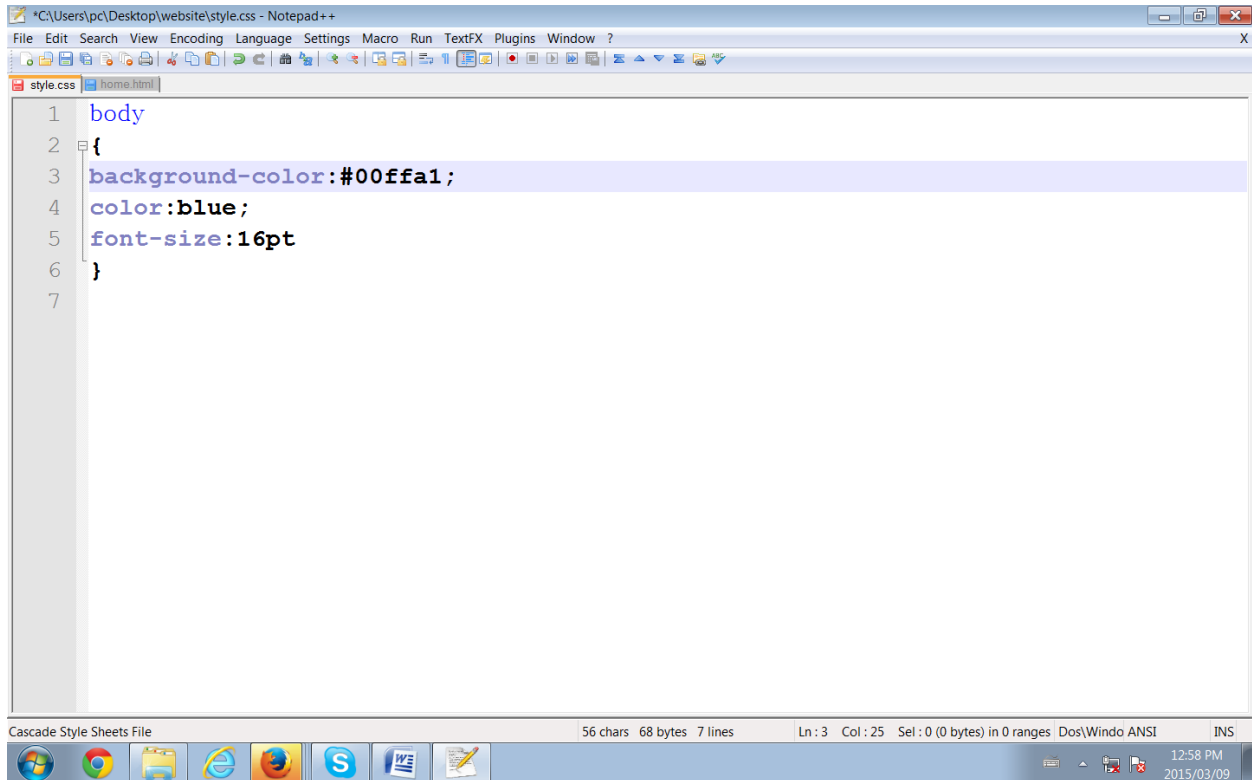
#dacffb

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

#11ff

#11004

As you can see in the examples above, the total combination of characters is less or equal to six. These colors can be used to replace the seven primary colors we know. Let us to use the first color for the background color of our web page as shown below.

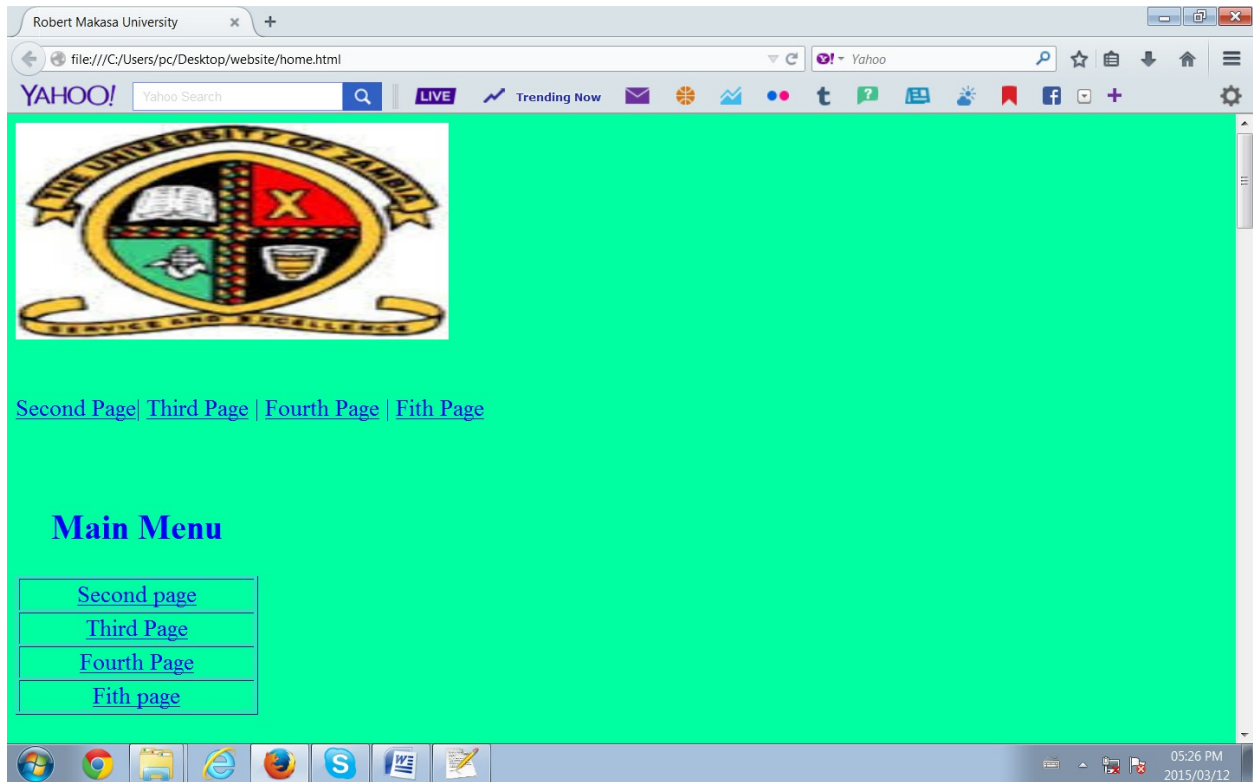
A screenshot of a Notepad++ window titled '*C:\Users\pc\Desktop\website\style.css - Notepad++'. The window shows a CSS file named 'style.css' with the following code:

```
1 body
2 {
3 background-color:#00ffa1;
4 color:blue;
5 font-size:16pt
6 }
7
```

The code is highlighted in a light blue background. The status bar at the bottom indicates 'Cascade Style Sheets File', '56 chars 68 bytes 7 lines', 'Ln : 3 Col : 25 Sel : 0 (0 bytes) in 0 ranges', 'Dos\Windo ANSI', and 'INS'. The system tray shows the date and time as '12:58 PM 2015/03/09'.

Let save the CSS and run the XHTML file to see what we got. We got the below background color.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



- **Background images**

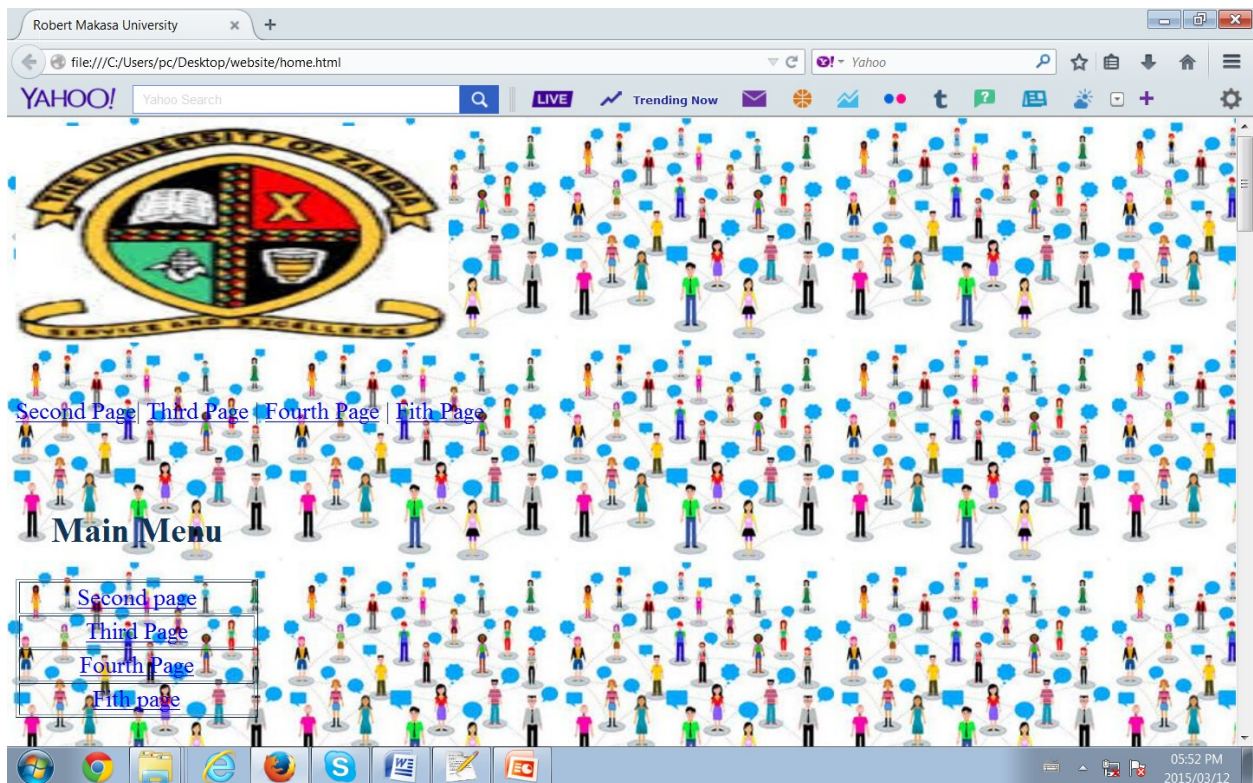
There are moments when we use an image as a background for our web page. The image that can be used as background should be transparency. We declare the property background and we specify the **url** for the source of image in CSS as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

```
CAUsers\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
style.css | home.html
1 body
2 {
3 background-image:url("images/backimage.jpg");
4 color:#123456;
5 font-size:16pt;
6 }
7

Cascade Style Sheets File 80 chars 92 bytes 7 lines Ln:3 Col:1 Sel:45 (45 bytes) in 1 range! Dos/Windo ANSI INS
05:52 PM 2015/03/12
```

In the above background image, the image name is backimage.jpg. Once we save and run, we see that image back image is displayed as background for our web page.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Note that the background image above is not transparency. You need therefore to use a background image that is transparent enough not to overshadow the text in your web page. I used this image for the sake of demonstrating to you.

ii. Text formatting CSS properties and values

There are so many CSS properties and values that are used to decorate the text of a web page. These include text color, alignment, decoration, transformation, and indentation. The color property has we have seen is used to change the color of our web text into our preferred color. You can use our seven basic colors or hexadecimal colors. Alignment uses the property **text-align** which is used to position your text in any direction. Text-align property has values such as center, left, right and justified. The decoration property is written as **text-decoration** and used to set or remove decoration from text. Possible values are overline, line-through, underline and blink. Transformation property is used as **text-transform** and used to change text into uppercase or lower case characters. The values are **uppercase**, **lowercase** and **capitalize**. The indentation is used to indent the first line of text. The CSS property of indention is **text-indent** and the values are normally in pixels.

Can we now go to our CSS file and practice these text formatting properties of CSS as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

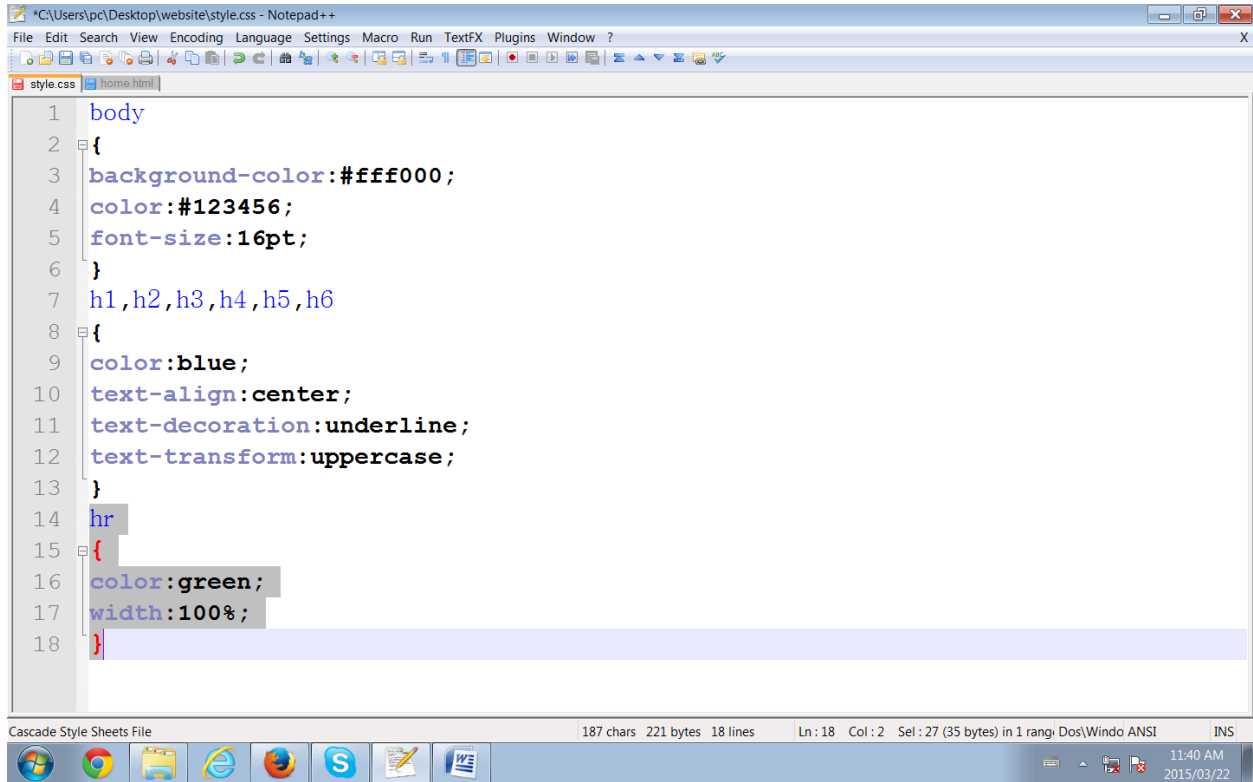
```
C:\Users\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
style.css home.html
1 body
2 {
3 background-color:#ff0000;
4 color:#123456;
5 font-size:16pt;
6 }
7 h1,h2,h3,h4,h5,h6
8 {
9 color:blue;
10 text-align:center;
11 text-decoration:underline;
12 text-transform:uppercase;
13 }
14
Cascade Style Sheets File 160 chars 186 bytes 14 lines Ln : 3 Col : 17 Sel : 0 (0 bytes) in 0 ranges Dos/Windows ANSI 11:24 AM 2015/03/22
```

Once we save and run, we will see that all the heading tags are in blue, centered, underlined and in uppercase shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Let us go back to our CSS file and decorate other tags with these text formatting properties as shown below.



```
1 body
2 {
3   background-color:#fff000;
4   color:#123456;
5   font-size:16pt;
6 }
7 h1,h2,h3,h4,h5,h6
8 {
9   color:blue;
10  text-align:center;
11  text-decoration:underline;
12  text-transform:uppercase;
13 }
14 hr
15 {
16  color:green;
17  width:100%;
18 }
```

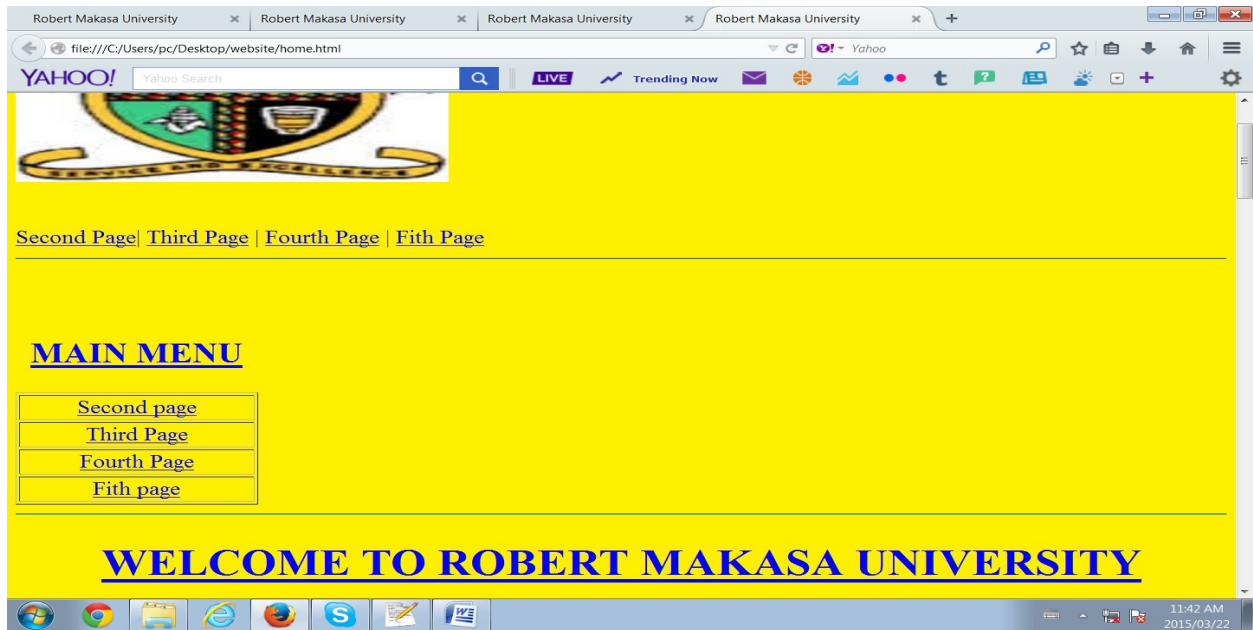
The screenshot shows a Notepad++ window with the following CSS code:

```
1 body
2 {
3   background-color:#fff000;
4   color:#123456;
5   font-size:16pt;
6 }
7 h1,h2,h3,h4,h5,h6
8 {
9   color:blue;
10  text-align:center;
11  text-decoration:underline;
12  text-transform:uppercase;
13 }
14 hr
15 {
16  color:green;
17  width:100%;
18 }
```

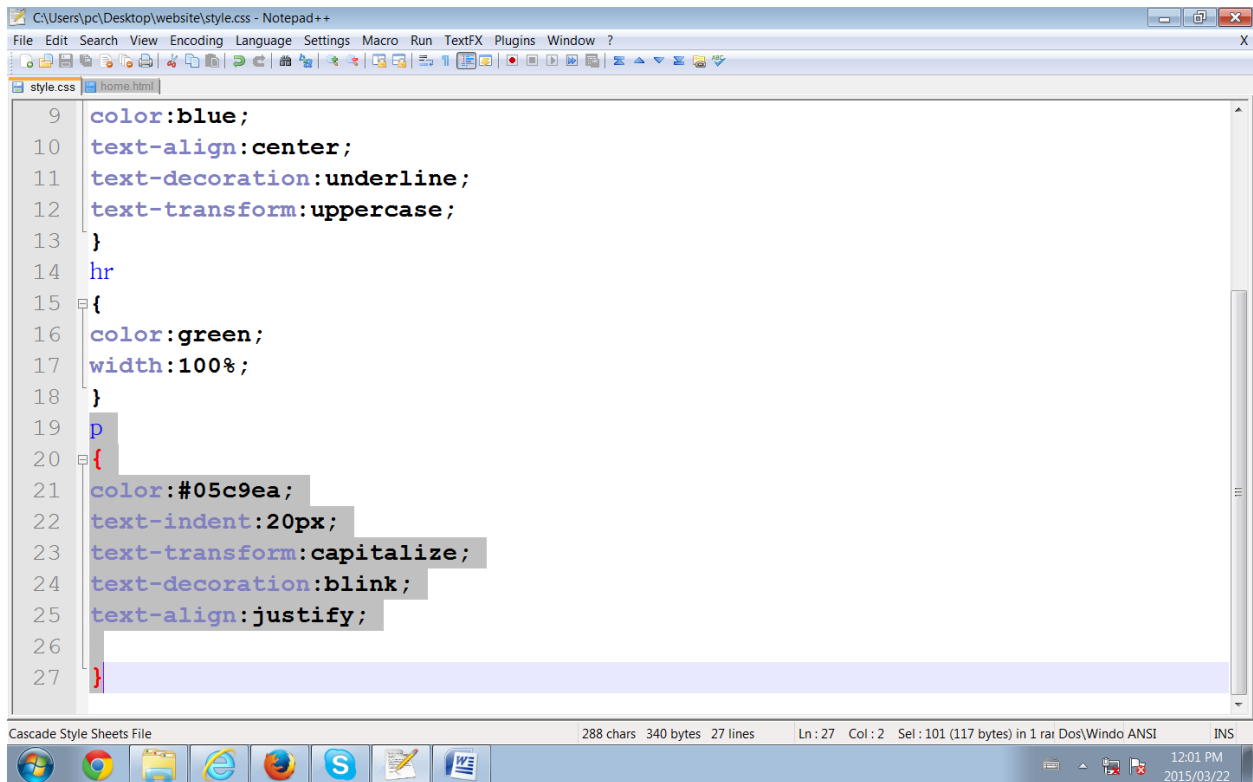
The status bar at the bottom indicates: Cascade Style Sheets File, 187 chars, 221 bytes, 18 lines, Ln: 18, Col: 2, Sel: 27 (35 bytes) in 1 rang, Dos/Windows ANSI, INS, 11:40 AM, 2015/03/22.

In the above CSS, we want all the horizontal lines to be covering the whole web page in terms of width and color of the lines should be green as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



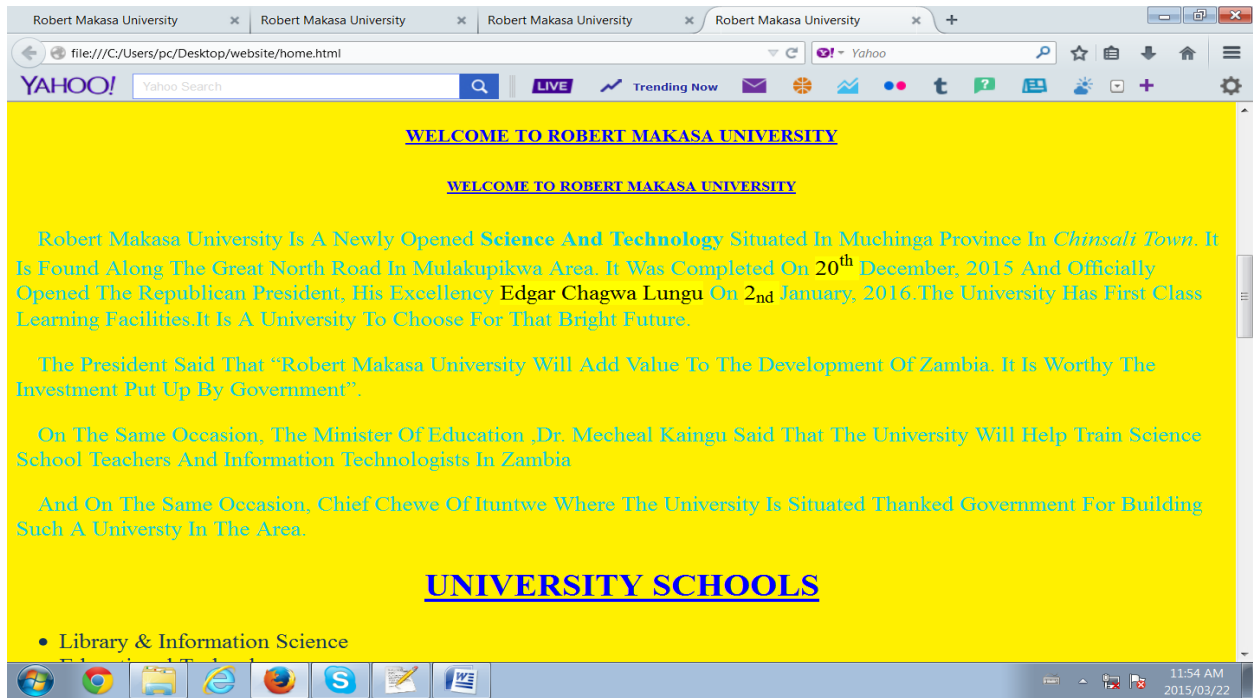
We can now try to decorate the paragraph tag as follows.



```
9 color:blue;
10 text-align:center;
11 text-decoration:underline;
12 text-transform:uppercase;
13 }
14 hr
15 {
16 color:green;
17 width:100%;
18 }
19 p
20 {
21 color:#05c9ea;
22 text-indent:20px;
23 text-transform:capitalize;
24 text-decoration:blink;
25 text-align:justify;
26 }
27 }
```

Once we save the CSS and run the html file, we see that the paragraphs have changed as prescribed in the CSS. The text will be 20px indented and the first letter of word will be capitalized as shown below.

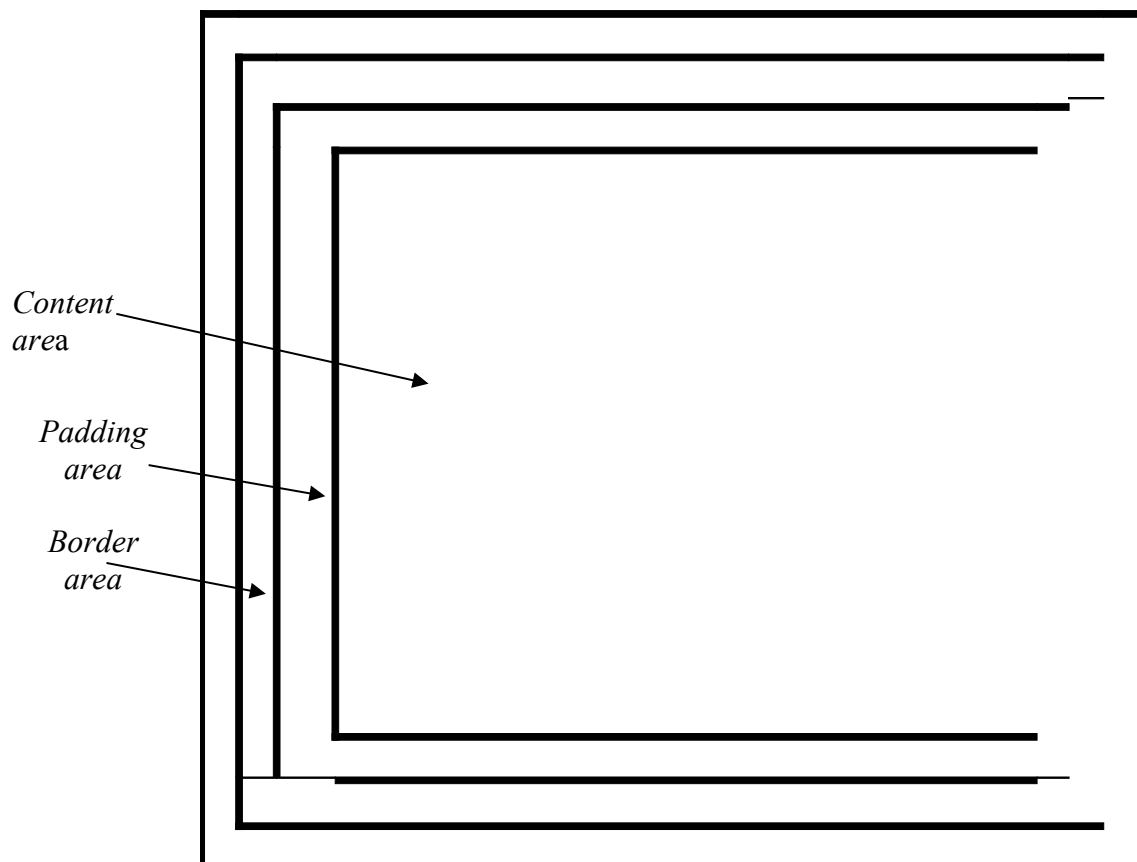
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Note: The blink value has been deprecated; meaning that it is has been phased out by the W3C and it is not being supported by major browsers. Therefore, you will not see text blinking.

iii. Box CSS properties and values

Box model in CSS is used to create or design a box like layout of a web page. The box layout will have rectangular subareas such as margins, borders, padding and content as show n below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



*Margin
area*

Content area- the content area encloses the actual contents of a web page.

Padding- this separates the content area from the box's border.

Border- the border goes around the padding and content.

Margin –this surrounds the border.

a. Border properties and values

This property enables you to create the borders of your web page in CSS. The property name is border whose value is in pixels as follows:

```
body
{
border: 100px solid #1100ff;
}
```

In the above example, CSS will create all the four borders with 100 pixels with solid hexadecimal color blue. **Note** however that the border property could also be married to things like direction or sides of the border to be created as shown below.

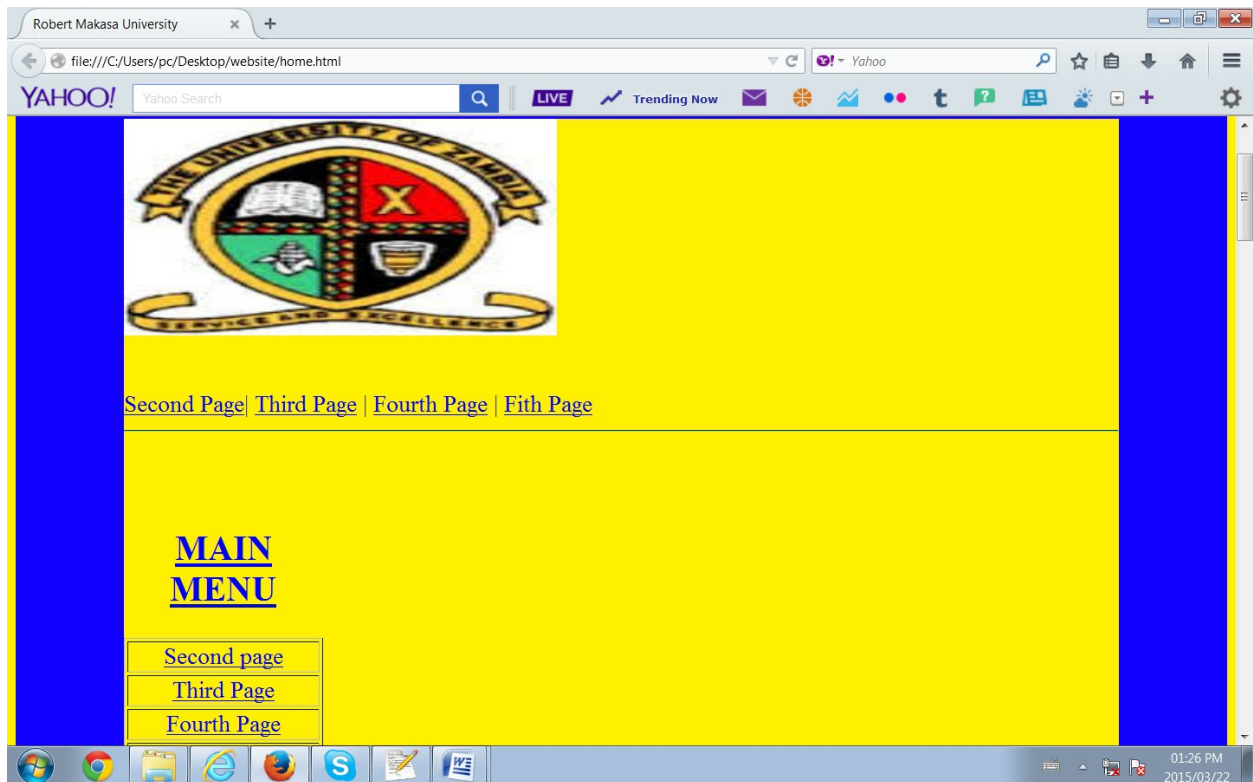
```
body
{
border-left:20px;
border-right:20px;
border-top:30px;
border-bottom:40px;
}
```

Let us go to our CSS and begin creating our borders.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

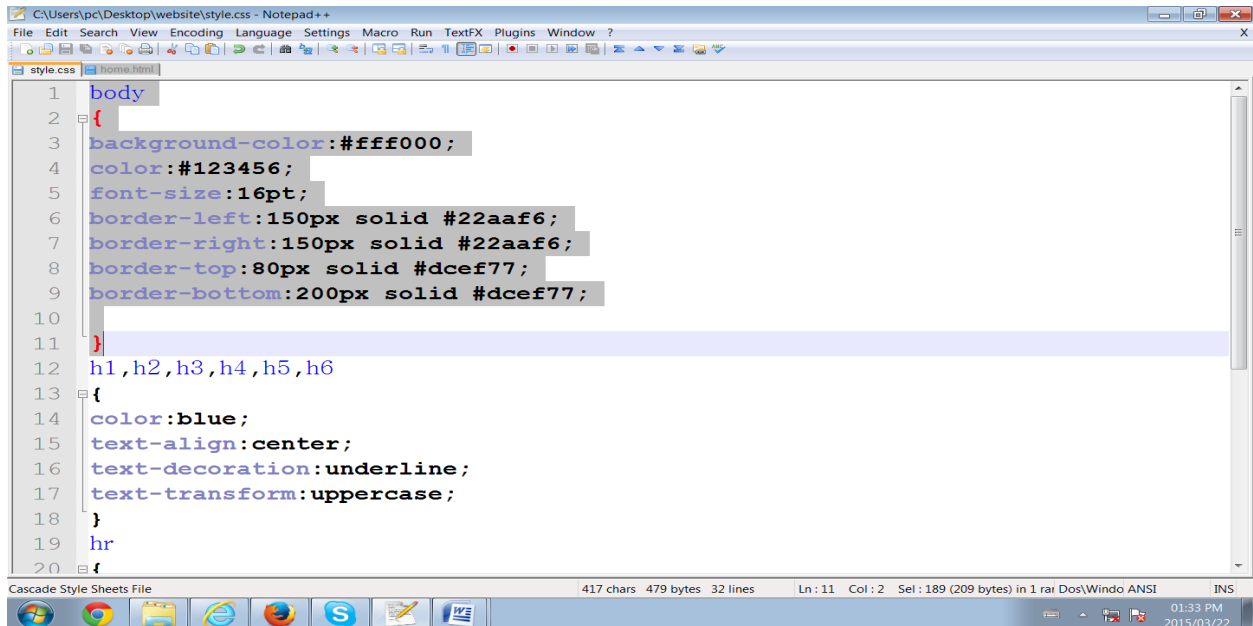
```
*C:\Users\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
style.css | home.html
1 body
2 {
3 background-color:#ff0000;
4 color:#123456;
5 font-size:16pt;
6 border:100px solid #1100ff;
7 }
8 h1,h2,h3,h4,h5,h6
9 {
10 color:blue;
11 text-align:center;
12 text-decoration:underline;
13 text-transform:uppercase;
14 }
15 hr
16 {
17 color:green;
18 width:100%;
19 }
20
```

Once we save CSS and run our html file, we see that indeed solid borders in blue with 100 pixels have been created as shown below.



LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Let us now specify different pixels for each every border. The right, left, top and bottom borders should have different pixels numbers as shown below.

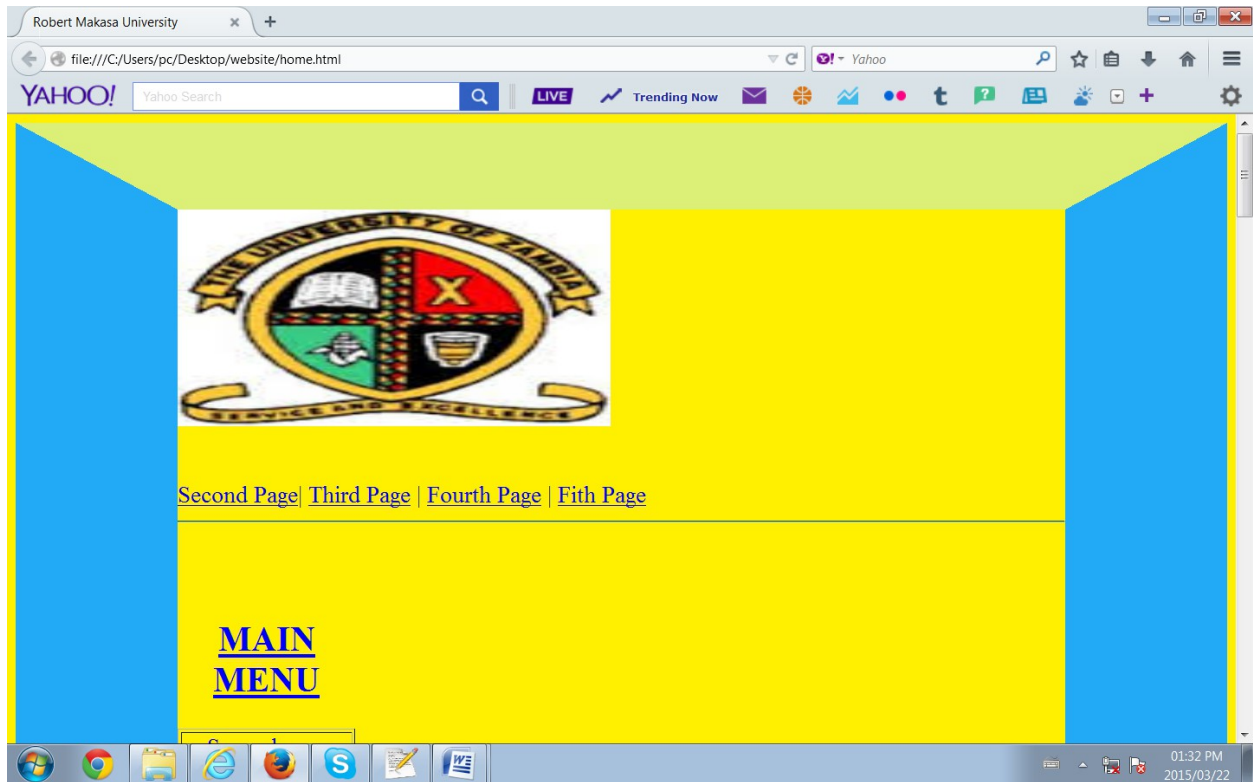


```
1 body
2 {
3   background-color:#fff000;
4   color:#123456;
5   font-size:16pt;
6   border-left:150px solid #22aaf6;
7   border-right:150px solid #22aaf6;
8   border-top:80px solid #dcef77;
9   border-bottom:200px solid #dcef77;
10 }
11
12 h1,h2,h3,h4,h5,h6
13 {
14   color:blue;
15   text-align:center;
16   text-decoration:underline;
17   text-transform:uppercase;
18 }
19 hr
```

The screenshot shows a Notepad++ window with a CSS file named 'style.css'. The code defines a 'body' selector with a yellow background, blue text, 16pt font size, and four different borders: 150px solid blue on the left and right, 80px solid green on the top, and 200px solid green on the bottom. Below the body selector, there is a selector for h1 through h6 with blue text, center alignment, underline, and uppercase transformation. The status bar at the bottom indicates 417 characters, 479 bytes, and 32 lines of code.

Once we save and run, we will see that borders as prescribed in CSS have been created.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Note that you can also create dotted borders. To do that you need just to replace solid with dotted as follows:

```
body
{
border-left:20px dotted red;
}
```

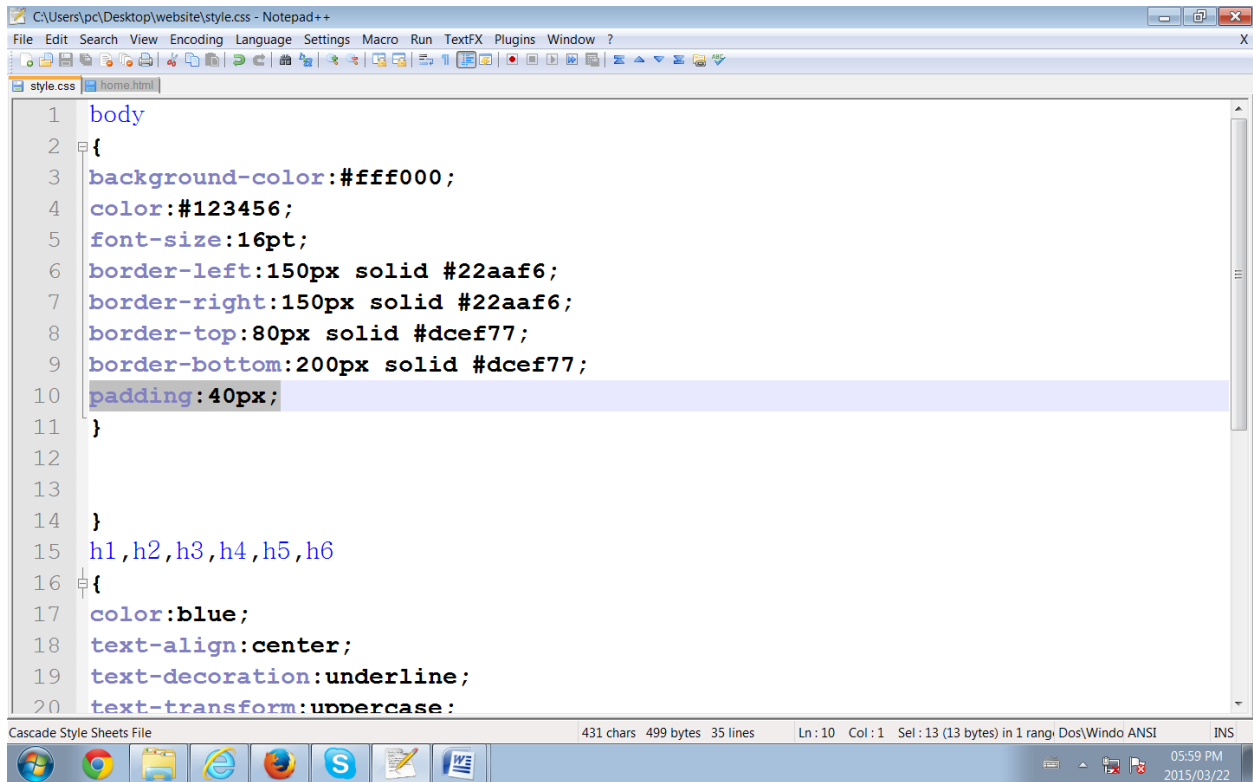
b. Properties and values

Padding property of CSS helps to create space between the contents and borders of our web page. The property used is padding and the values are in pixels as shown below.

```
body
{
padding:40px;
}
```

Let us try this property in our CSS save and run our html file and see what results we will get.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

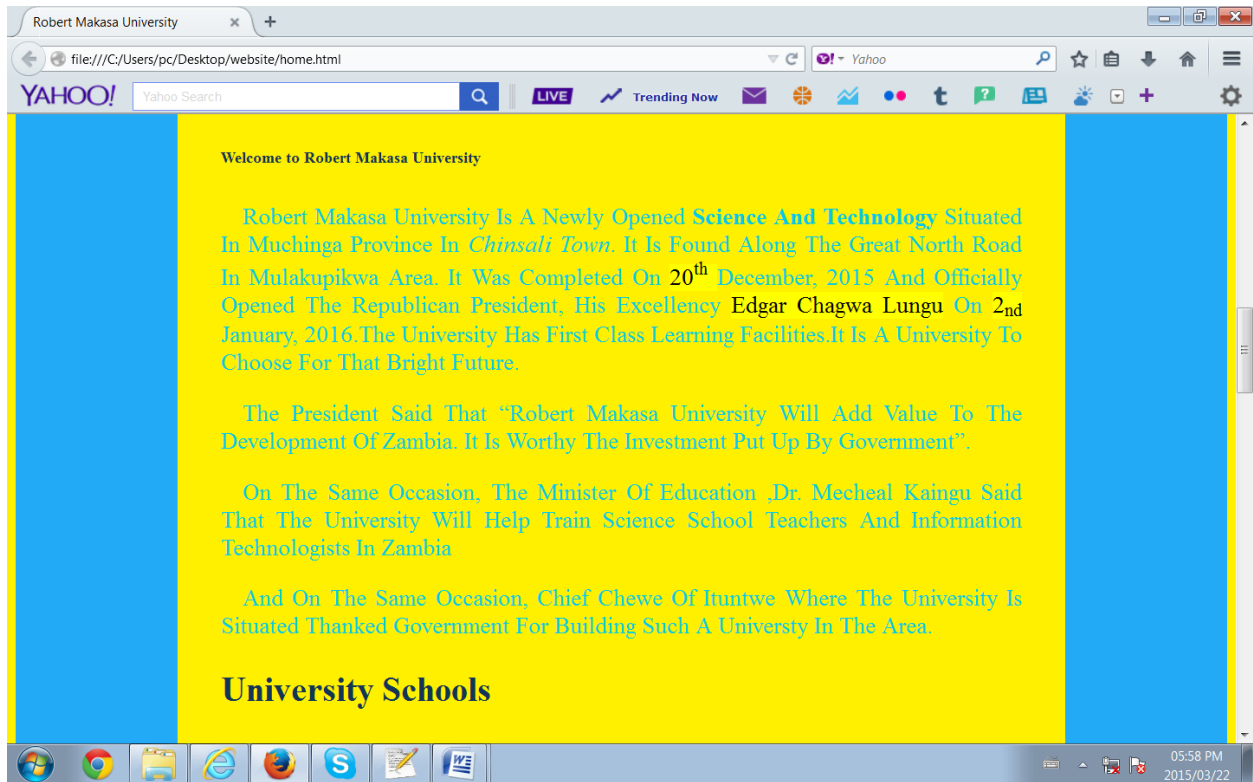


```
C:\Users\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
style.css home.html
1 body
2 {
3 background-color:#fff000;
4 color:#123456;
5 font-size:16pt;
6 border-left:150px solid #22aaf6;
7 border-right:150px solid #22aaf6;
8 border-top:80px solid #dcef77;
9 border-bottom:200px solid #dcef77;
10 padding:40px;
11 }
12
13
14 }
15 h1,h2,h3,h4,h5,h6
16 {
17 color:blue;
18 text-align:center;
19 text-decoration:underline;
20 text-transform:uppercase;
```

Cascade Style Sheets File 431 chars 499 bytes 35 lines Ln:10 Col:1 Sel:13 (13 bytes) in 1 rang: Dos\Windo ANSI INS 05:59 PM 2015/03/22

We will see definitely in the below screen shot that the text is moved from the border by 40 pixels as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



You can also specify the padding for each and every border side as demonstrated below.

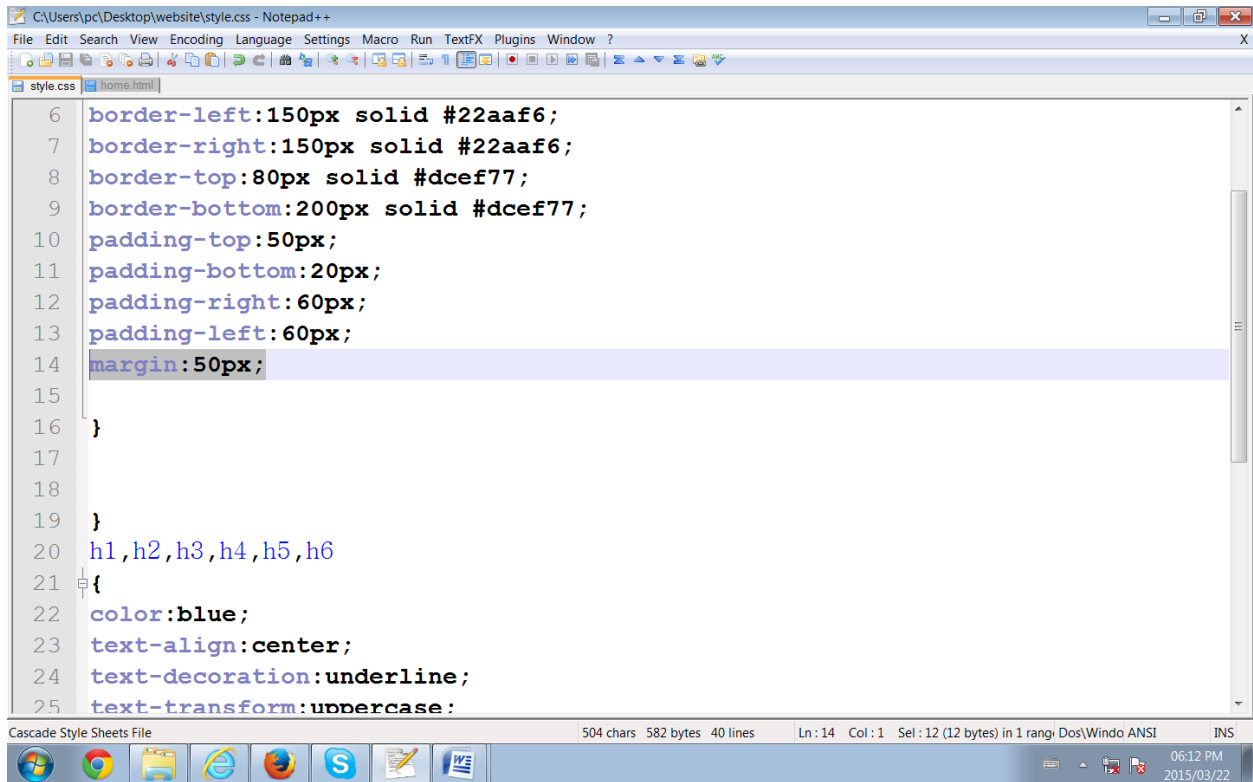
body

```
{  
padding-top:50px;  
padding-bottom:20px;  
padding-right:60px;  
padding-left:60px;  
}
```

c. Margin property

This creates space between the edges of your web page and borders. The property is margin and values are in pixels as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



```
6 border-left:150px solid #22aaf6;  
7 border-right:150px solid #22aaf6;  
8 border-top:80px solid #dcef77;  
9 border-bottom:200px solid #dcef77;  
10 padding-top:50px;  
11 padding-bottom:20px;  
12 padding-right:60px;  
13 padding-left:60px;  
14 margin:50px;  
15  
16 }  
17  
18  
19 }  
20 h1,h2,h3,h4,h5,h6  
21 {  
22 color:blue;  
23 text-align:center;  
24 text-decoration:underline;  
25 text-transform:uppercase;
```

The screenshot shows a Notepad++ window with a CSS file named 'style.css'. The code defines a border with a 50px margin, padding, and a blue color for h1-h6 elements. The status bar at the bottom indicates 504 characters, 582 bytes, and 40 lines of code.

Once you save CSS and run your html file, you see that the space between the edges of the web page and borders has been created as specified as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



You can also specify the margin for each and every border side as demonstrated below.

body

```
{  
margin-top:50px;  
margin-bottom:20px;  
margin-right:60px;  
margin-left:60px;
```

```
}
```

d. Other CSS properties

There are other CSS properties and values that we use to do among other things; show the state of the links, and float contents.

i. Hyperlink pseudoclasses

These CSS classes are used to show the **three** special states of hyperlinks a web page (Chuck and Bill: 2011). These states are **not yet visited**, **active** and **visited**. Through these three states, any browser will be able to display a color indicating whether the link has not been

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

visited, active or visited. To completely define all three states of the <a> tag, you might write:

a:link

```
{  
color: blue;  
}
```

a:active

```
{  
color: red;  
}
```

a:visited

```
{  
color: green;  
}
```

- **Explanation of the above CSS statements**

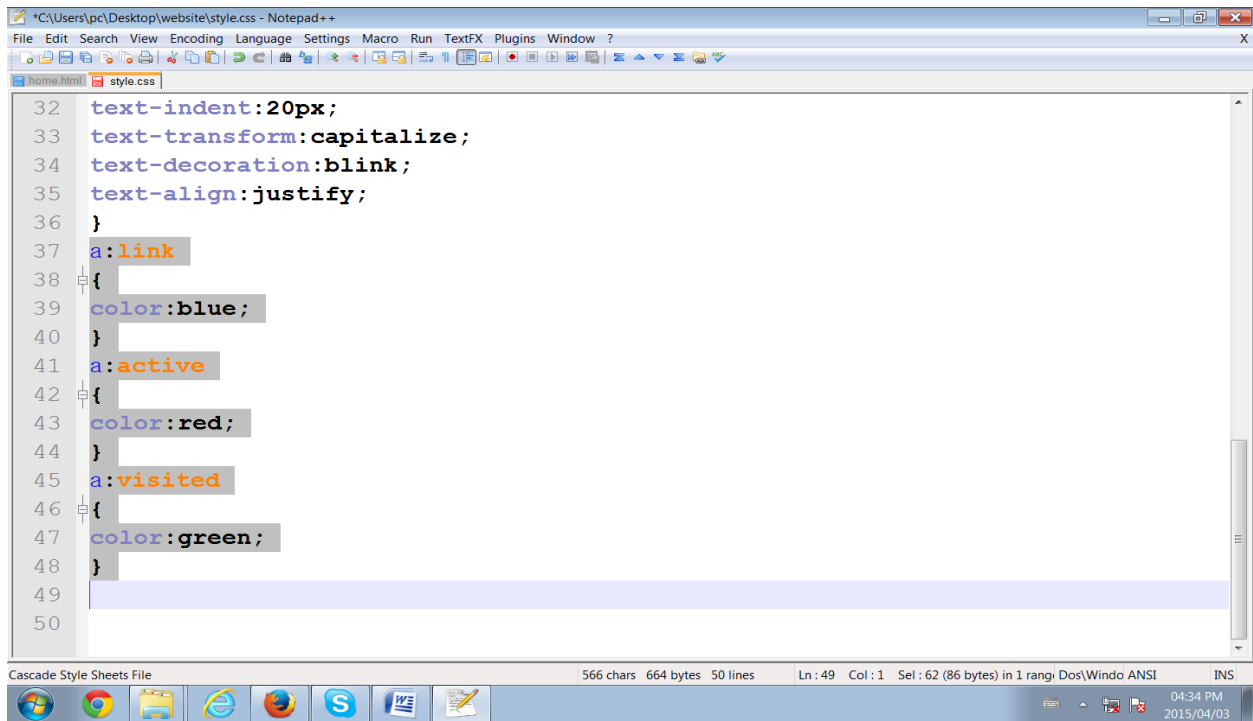
a:link- This is used to control links that are not selected by the user and have not been visited.

a: active- This defines the appearance of the links that have been selected and being processed by the browser.

a:visited- This defines the links that have been already visited.

Let us now go to CSS file and apply these three states.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

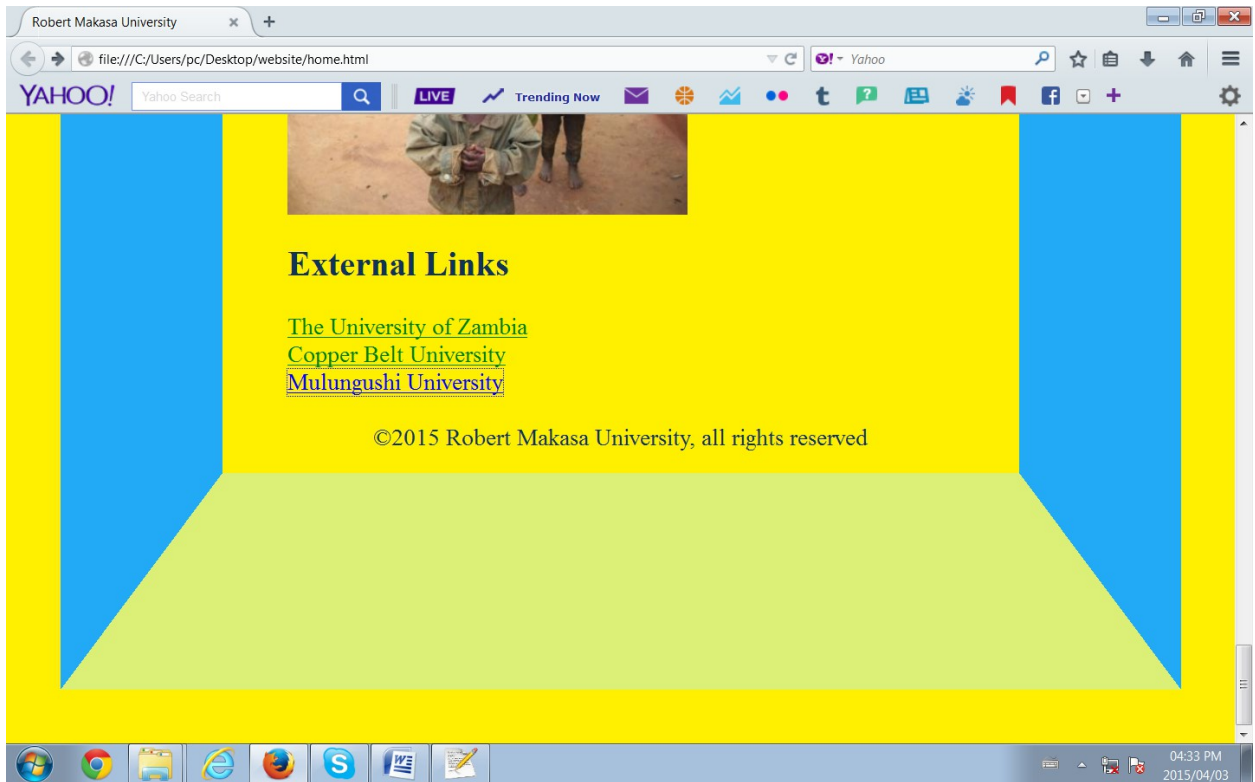


```
*C:\Users\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html style.css
32 text-indent:20px;
33 text-transform:capitalize;
34 text-decoration:blink;
35 text-align:justify;
36 }
37 a:link
38 {
39 color:blue;
40 }
41 a:active
42 {
43 color:red;
44 }
45 a:visited
46 {
47 color:green;
48 }
49
50
```

Cascade Style Sheets File 566 chars 664 bytes 50 lines Ln : 49 Col : 1 Sel : 62 (86 bytes) in 1 rangi Dos\Windo ANSI 04:34 PM 2015/04/03

Once we save and run, we see indeed that the visited links are in green, links that are yet to be visited will be in blue and those that are active; being processed by the browser will be in red as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



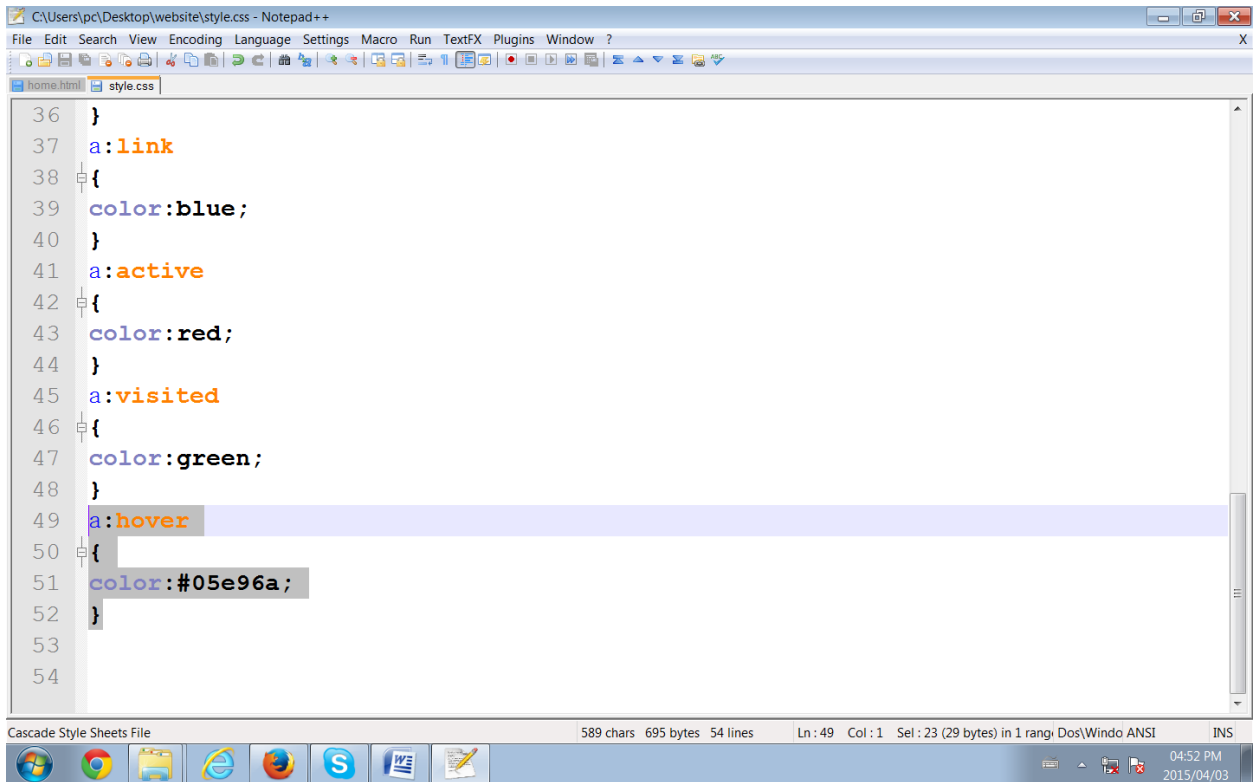
Note that there are other pseudoclasses of CSS that are interactive. These are **hover** and **focus**. Hover changes the link's style to another once the cursor is pointed on it. Similarly, focus changes the style of link or an element when it becomes a subject of focus (clicks on it or advance the cursor to it).

a:hover

```
{  
color:#2dc467;  
}
```

When we go to our CSS and introduce the hover property to it, we will see that indeed the link color is changing from the initial one to the color prescribed in the hover. Let us try it.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

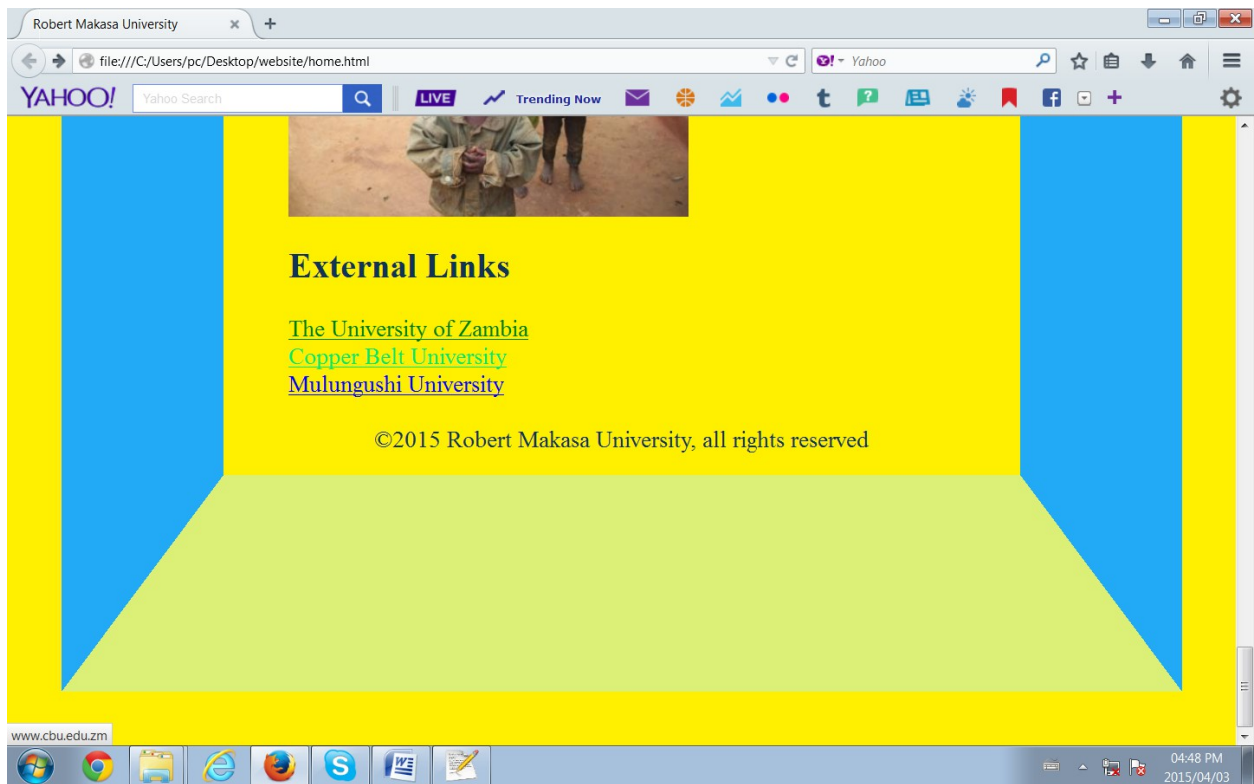


```
C:\Users\pc\Desktop\website\style.css - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
home.html style.css
36 }
37 a:link
38 {
39   color:blue;
40 }
41 a:active
42 {
43   color:red;
44 }
45 a:visited
46 {
47   color:green;
48 }
49 a:hover
50 {
51   color:#05e96a;
52 }
53
54
```

Cascade Style Sheets File 589 chars 695 bytes 54 lines Ln: 49 Col: 1 Sel: 23 (29 bytes) in 1 rang: Dos\Windo ANSI INS 04:52 PM 2015/04/03

Once we save and run, we will see that upon pointing the cursor on the link, the color of that link will change to the hover color as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



ii. Float

Float is one of the properties of CSS which is vital in moving contents either to right or left. It is important when dealing with menus and external links. You may for instance wish to put the external links on the right corner of your web page. The values of float are **none**, **right**, **left**, **initial** and **inherit**.

None-It is the default. The contents are not floated.

Right-This pushes the contents to the right corner of the web page.

Left-This takes the contents to left side of the web page.

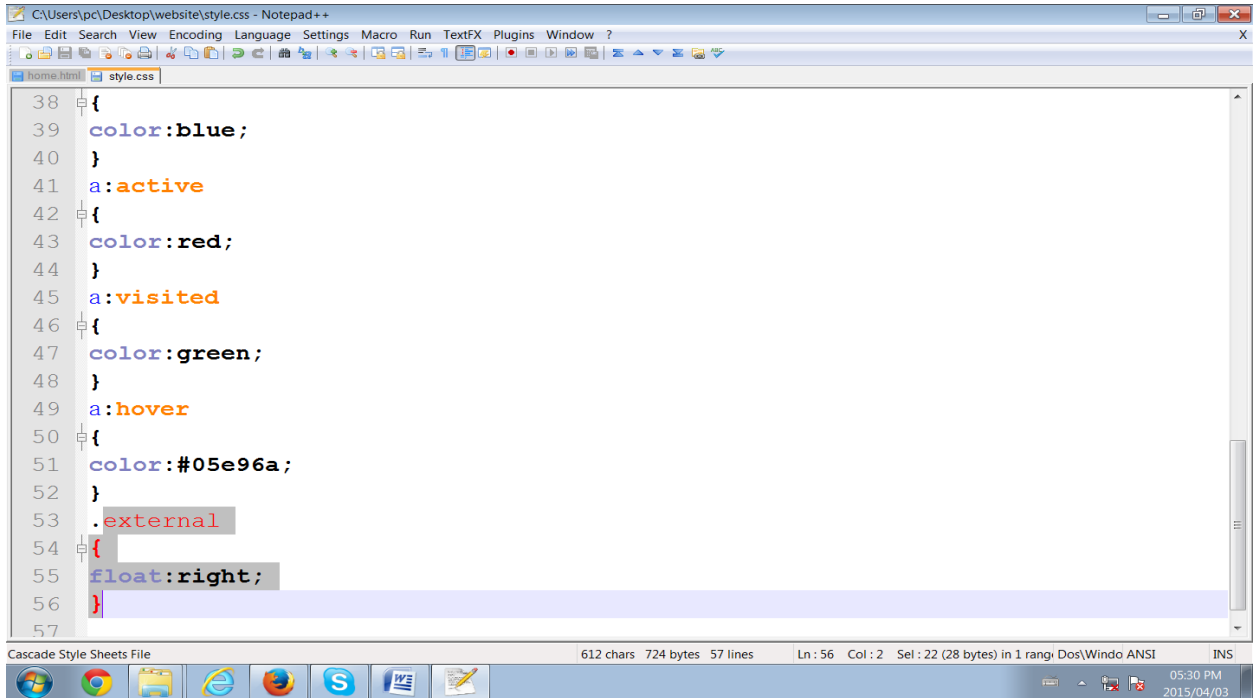
Initial-This takes the contents to their default position.

Inherit-The elements to which float is being applied takes the property of its parent elements.

Let us use the two values; *right* and *left* on the division tag that we created to nest all the external links in our web page. The division tag of the external links has an attribute class which has the value called **external**. It is that value called external that we will use in CSS as an anchor to float all the external links. Note that the value external in CSS will be preceded

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

by a point (.). If the attribute was **id**, the value external in CSS would have been preceded by a hash (#) symbol. And remember that the id attribute is used once in any web page while the class attribute can be used many times.

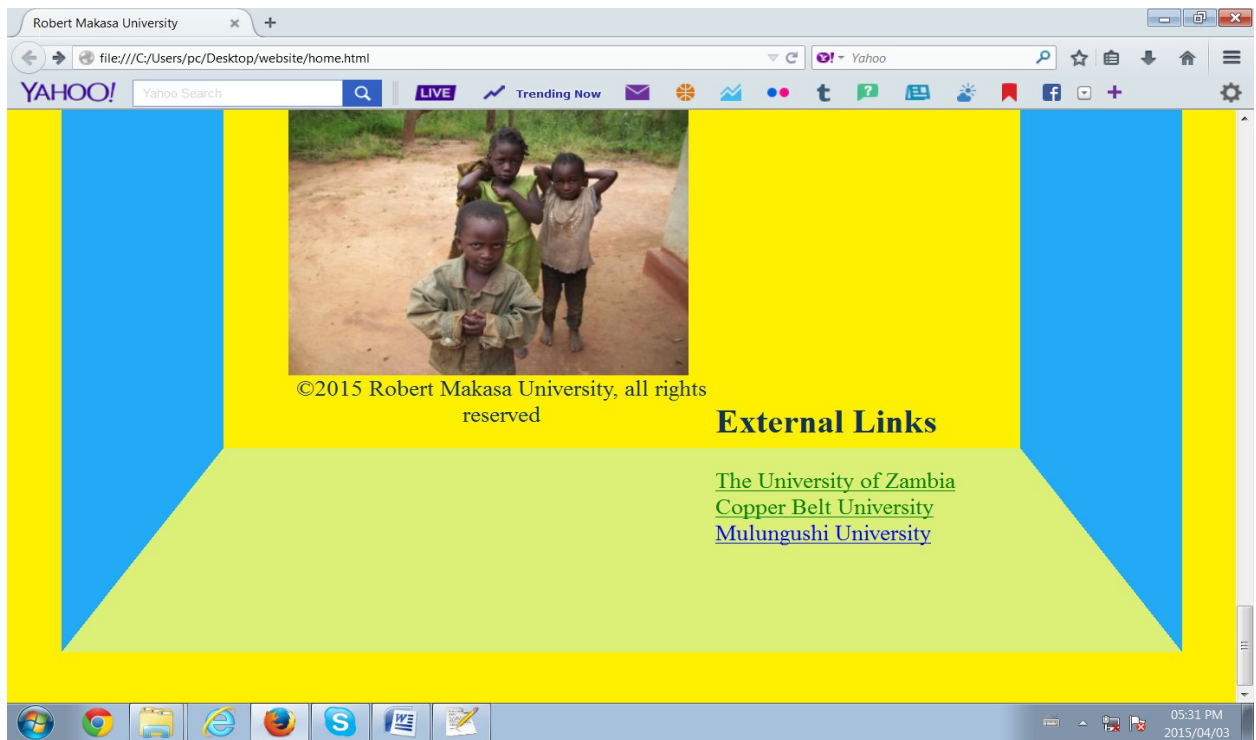


```
38 {
39 color:blue;
40 }
41 a:active
42 {
43 color:red;
44 }
45 a:visited
46 {
47 color:green;
48 }
49 a:hover
50 {
51 color:#05e96a;
52 }
53 .external
54 {
55 float:right;
56 }
57
```

The screenshot shows a Notepad++ window with the following CSS code: Line 38: {; Line 39: color:blue;; Line 40: }; Line 41: a:active; Line 42: {; Line 43: color:red;; Line 44: }; Line 45: a:visited; Line 46: {; Line 47: color:green;; Line 48: }; Line 49: a:hover; Line 50: {; Line 51: color:#05e96a;; Line 52: }; Line 53: .external; Line 54: {; Line 55: float:right;; Line 56: }; Line 57: . The status bar at the bottom indicates 612 chars, 724 bytes, 57 lines, and the current selection is on line 56, column 2, containing 28 bytes.

Once we save and run, we will see that the external link is pushed to right as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



You can also try with left value; you see that the external link will be pushed to the left.



Summary

We have learnt that CSS plays a complimentary role to XHTML. It helps to create appealing web pages. We have also learnt that there are four ways to use CSS in your XHTML file. These are *external* (using an external CSS file that is linked in the head section of XHTML file), *inline* (put CSS style in each and every tag), *embedded* (put CSS in the head section of XHTML file; before the actual XHTML tags) and *import* (which involves importing CSS from another webpage on the Internet or Intranet). We further learnt that there are several CSS properties and their values that are used in decorating and changing the graphical outlook of a web page. These include the **color** (which include color that apply to text and background color), **font** (which is used to declare the font size and font family that the browser will use to display the text.), **text formatting** (which help one to perform among other things; transforming text into Uppercase, lowercase, center text, and), **border** (used to create borders on the webpage), **padding** (used to create space between the contents of a web page and the borders), **margin**(used to create margin lines on a web page), properties. Other CSS properties are called pseudo class and used mainly to

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

indicate the state of the links whether they have not yet been visited, active or already visited. Other CSS properties learnt is **float** which is used to take contents to the desired position. Right or left is the most desired position for floating some contents of web page.



Activity

1. Create an external CSS file and link it to your web page.
2. Apply the learnt CSS properties to your web page.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Unit 6: Introduction to Website Hosting

Introduction

Unit six introduces you to web hosting world. As you may be aware, creating a web page or web site does not mean it is automatically available on the Internet and World Wide Web for the users to visit it. You need to go a step further by testing the website locally (on a local server), booking the domain name and hosting space. This section will therefore explain who you could go about hosting your website.

Aims

This unit aims at introducing to website hosting procedures.

Objectives

At the end of this unit, you should be able to do the following:

- Test a website a local server.
- Acquire the domain name for your website
- Book hosting space for your website
- Know how to transfer the website files from your local machine to the website hosting machine (server)

Resources

As indicated in the previous units, you need a computer with at least two web browsers installed on it (*Internet explorer* and *Fire Fox*). It should also have file transfer software such as **WinSCP** and **File Zilla**.

Addition Resources

You need books and other information resources that deal with website Hosting.

Below is a book that can supplement this module:

Castro, E (2003). *HTML for the World Wide Web: with XHTML and CSS*. 5th Ed. Berkeley: Reference. New York: Press

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Time Frame

You need **one** week to finish this unit.

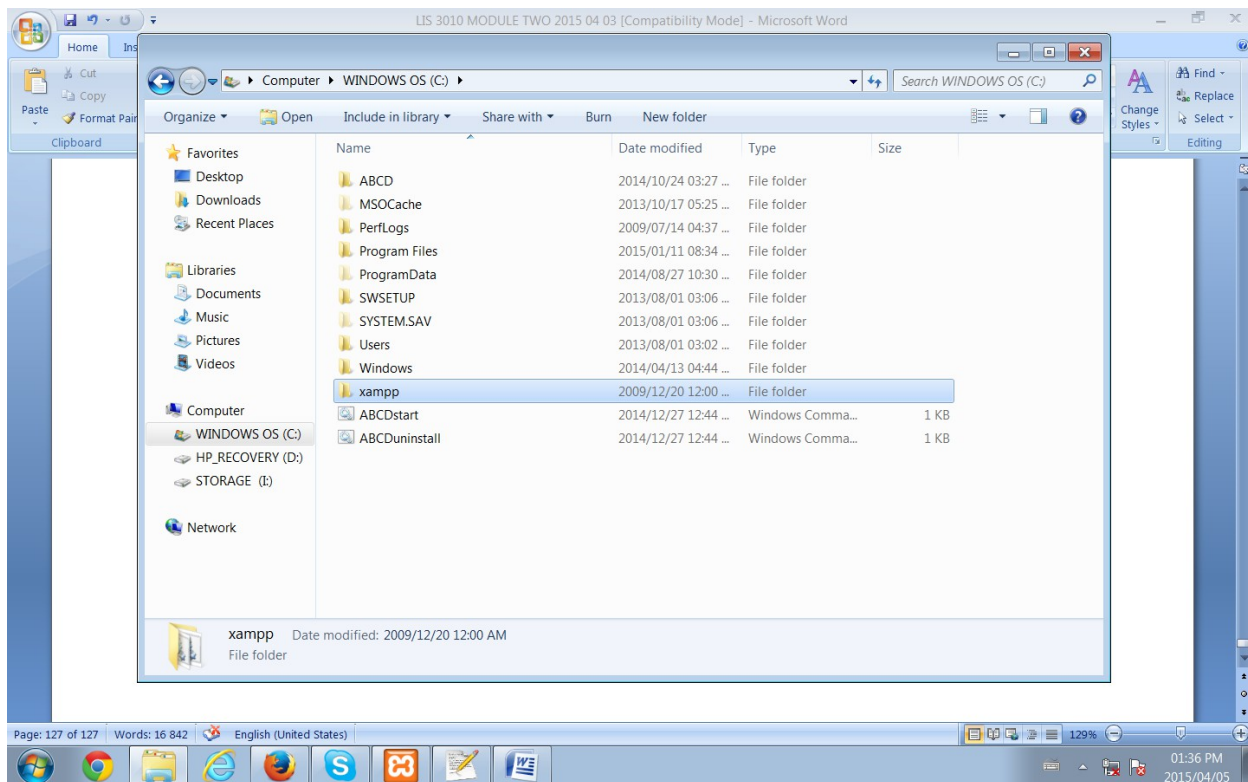
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

6.1 Introduction to Website Hosting

As already stated, once you design a website, you need to host it; you need to put it online so that users can access it. But before you put it on the internet connected server (online), you need to test your website locally; using a local server. Thereafter, you can proceed to host it on server on the Internet. To host a website on a server on the Internet, there are a number of things that you need to do for you to successfully host your website. These include acquire or book for your domain name and hosting space. You need also to transfer the actual website files (XHTML, CSS and image files) to the hosting server.

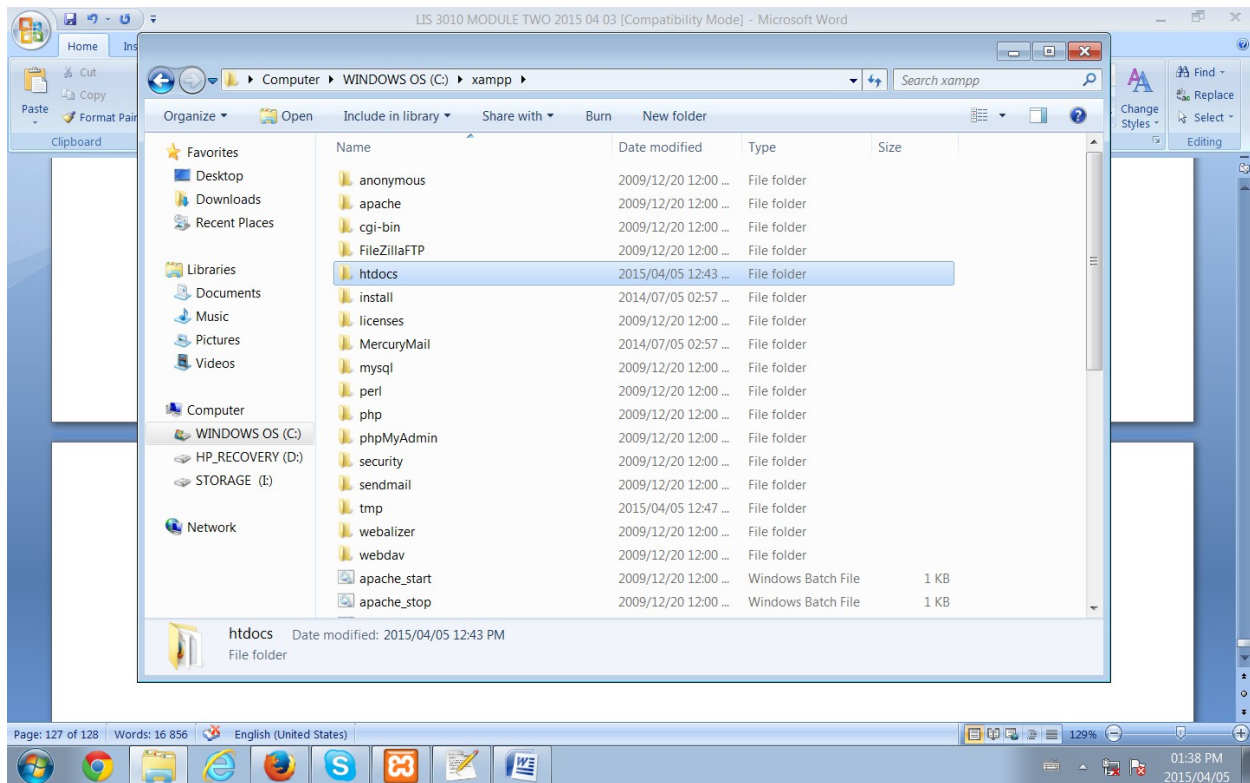
6.2 Testing website on a local server

Since we have already installed a server called Apache when we were design a MySQL database, we will not begin installing another server. Apache is a server that we have installed when we installed Xampp. What we need to do to test our website is to start the server. Thereafter, copy the website folder; in my case the website folder was called **website**. Have copied the server, go to the computer compartment called **C**, click it and locate the program called **Xampp** as shown below.



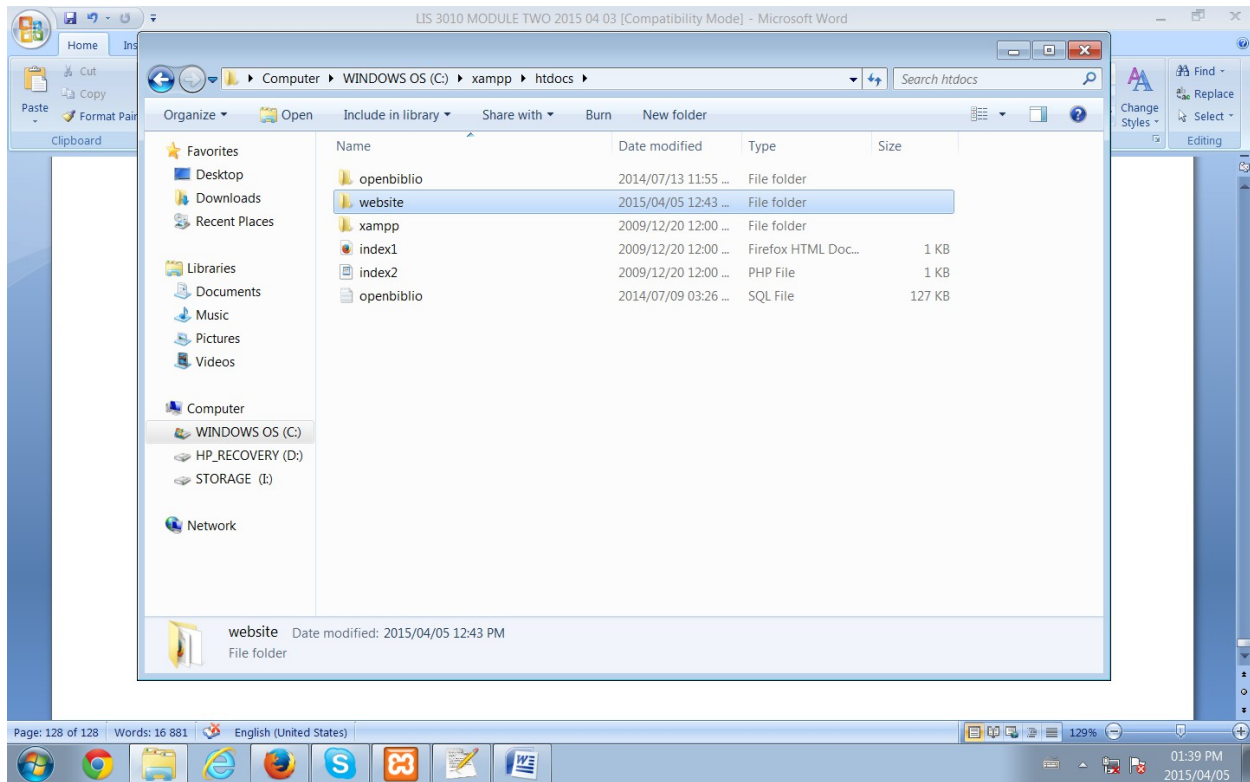
LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

Thereafter, open the program Xampp and locate the folder called **htdocs** as shown below.



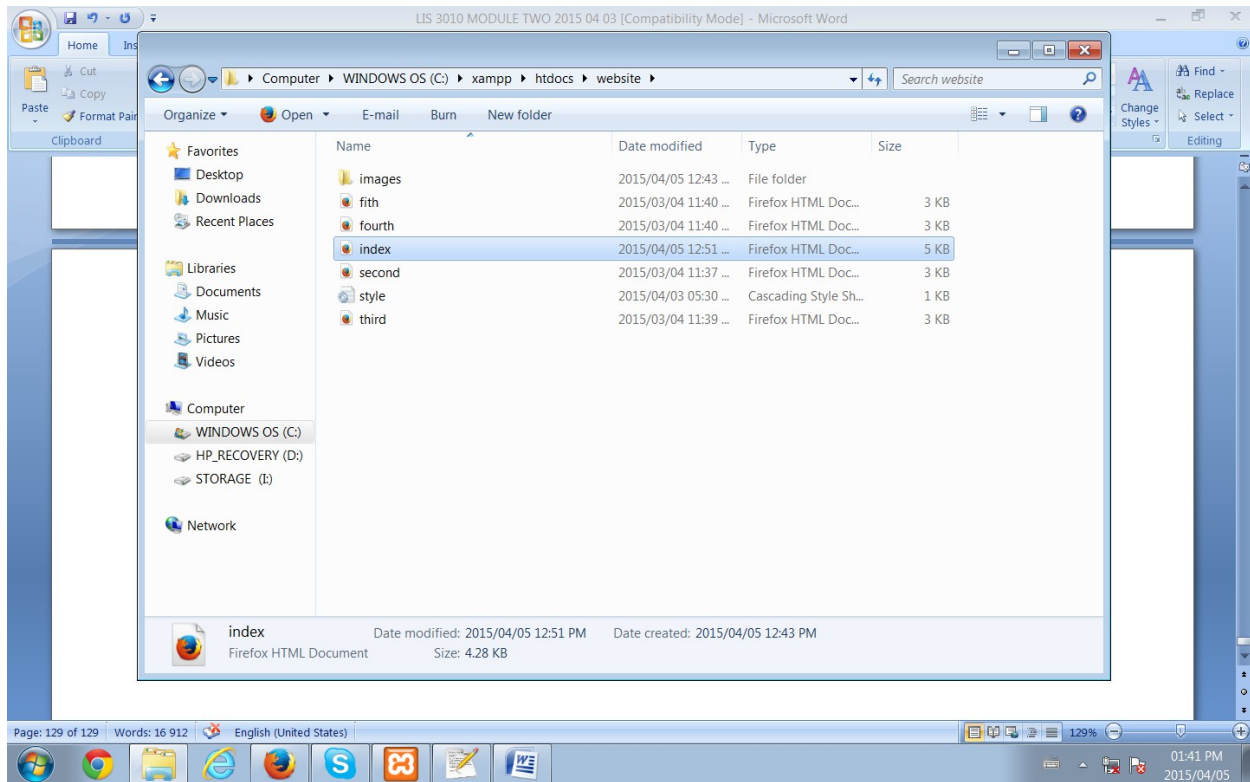
It is in htdocs, you will paste your website folder. In case I will paste my website folder called website in there as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



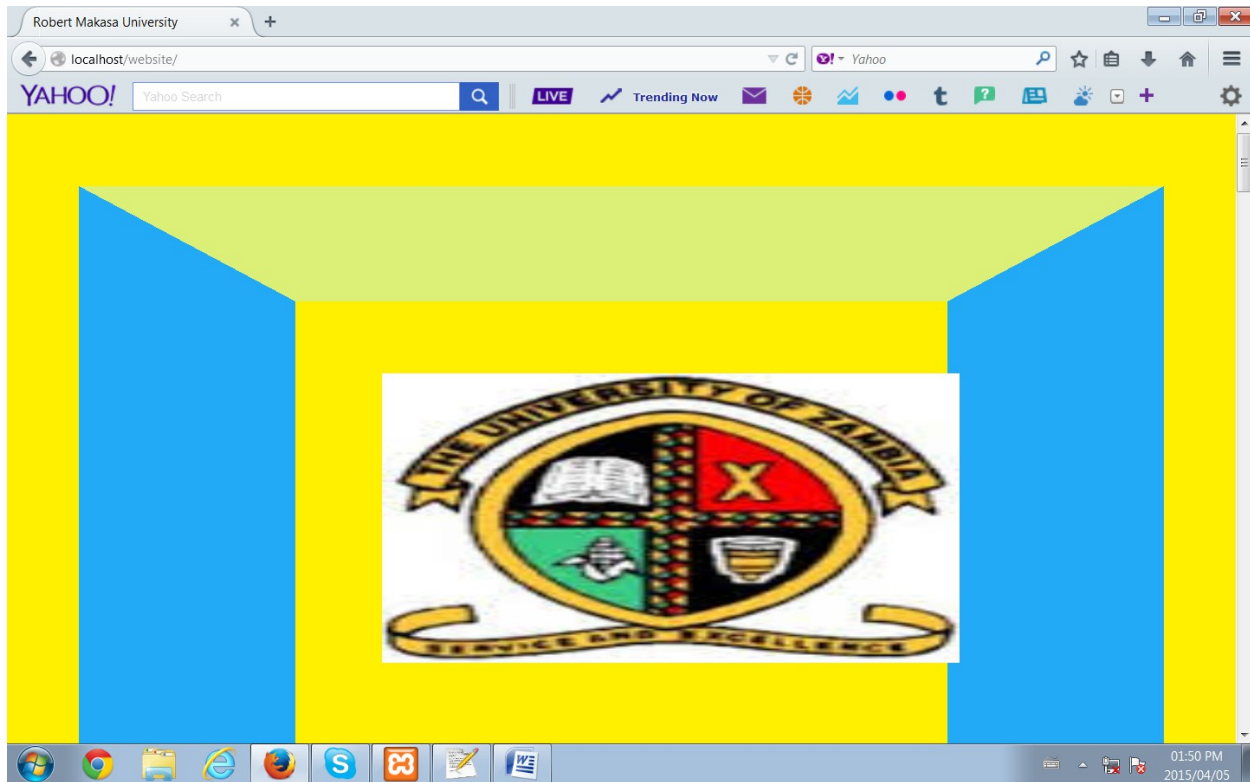
Having done that, you can open your website folder and rename, the home page to index.html. This is a rule on web servers that the home page is named as such.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Now we are ready to retrieve our web pages from a local server using our browser. To do that open any browser and type in the browser window the name of the server and the website folder. In my case the name of the server will be **localhost** and the **website** folder will be website. So the query to type in the browser window will be **localhost/website**. Once we enter or click on the arrow button in the right window of the browser, the index.html will be retrieved as shown below.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING



Note that you can test the correctness of your XHTML tags and CSS by sending them to the World Wide Web Consortium for validation at <http://validator.w3.org/>. Alternatively, you can use many other online XHTML and CSS validators such as WDG HTML validator. But I recommend you use the W3C to validate your web pages.

6.3 Acquire the domain name for your website

Having tested and validated your web pages, you need to take a step forward by acquiring the domain name. A domain name is basically a physical address that will be associated with your website on the Internet. An example of a domain could be: www.muchingaprovince.zm or www.tuesdaystores.com. **Note** that the domain name is not the URL. But is part of the URL.

i. **Body responsible for assigning domain names**

There is a body that is responsible for domain names, IP addresses and internet protocols globally; it is called **Internet Corporation for Assigned Names and Number (ICANN)**. ICANN runs the business of IANA (**Internet Assigned Numbers Authority**). ICANN has continental bodies working with it to coordinate the assigning of domain names. For instance in Africa, we have AFRINIC. Note that the selling of the actual domain name has liberalized; with

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING

private companies such Zamtel, Godaddy, and 1&1 actively participating.

ii. **Types of domain names**

There several type of domain names. These include **original top-level domain** (with extensions such as *.com*, *.org*,*.net*,*.int*,*.gvt*,and *.mil*), **infrastructure top-level domain** (this is deducted to important projects such as *.arpa* which was given to Advanced Research project which gave birth to the Internet), **country code-level domain** (these are extensions used to represent countries such as *.zm* for Zambia and *.za* for South Africa.), **internationalized generice-level domain** (proposed extensions representing the full name of a county such as *.在线* for China and *.wales* for Wales), **ICANN-era generic top-level domain** (these are extensions which can be used by any individual organizations which include *.accounts*, *.librarian*,*.musician*),**geographical top-level domains** (this carry the extensions of geographical places such as *.africa*,*.Asia*, *.capetown and taipe*),and **brand top-level domains** (these carry extensions of brands such as *.android*,*.chrome* and *.google*)

iii. **Procedure of booking a domain name**

- You need first decide on the type of domain name to acquire. If you are running a company, the most used domains names are those with an extension *.com* and *.org*. If a learning institution, you can use those with the extension *.edu*. For public institutions, you are advised to book for a domain name with the extension carrying the name of the country such as *.zm* or *.za*.
 - Secondly identify the company the sells the domain name with the extension of your choice and check how much it is selling the domain name. For instance, 1 and 1 can sell you a domain name even at less than \$7 to use it for a year. Other sellers of domain names especially in Africa and Zambia in particular are expensive but affordable.
- iv. Thereafter, you need to begin the process of booking the domain name. This could be done online. Godaddy and 1 and 1 allows you choose your own domain name and pay for it online if it is available. You need therefore to go to the website of these domain name sellers and begin the process as shown below.

v.

LIS 3010 MODULE TWO DRAFT: WEBSITE DESIGNING