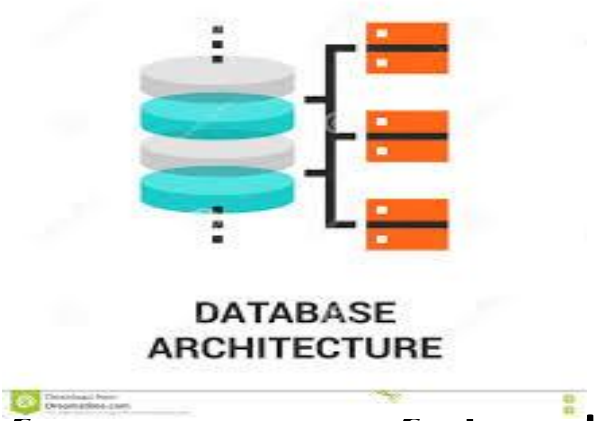
Types of Database Systems Architecture



- There are four types of database systems architecture

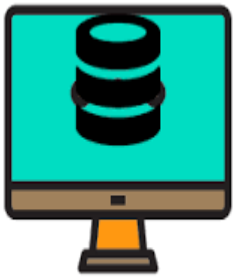
✓ 1-tier

✓ 2-tier

✓ 3-tier

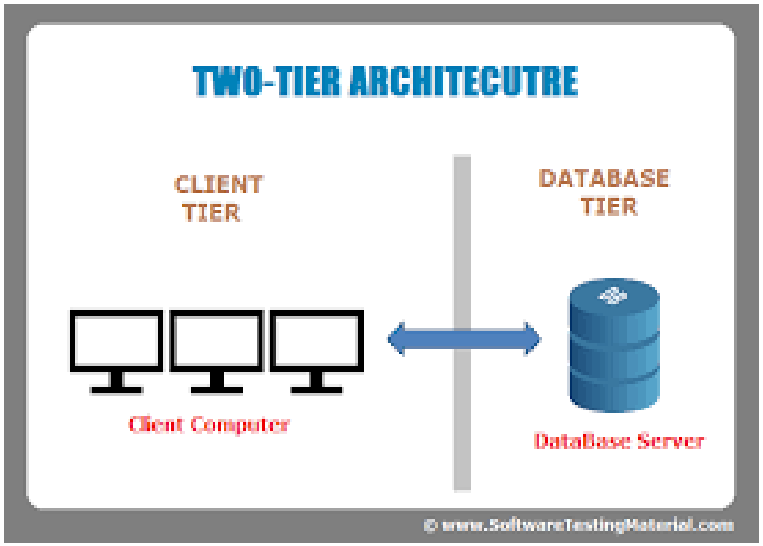
✓ N-tier

One tier database system



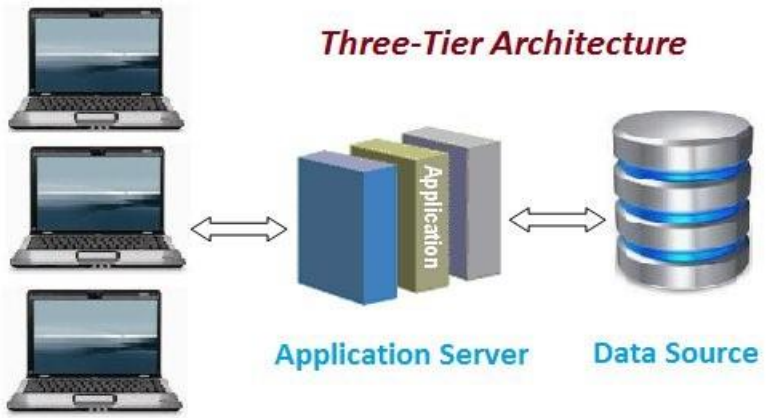
- This is sometimes refers to Single-database architecture
- In this architecture, the database system is stored on the personal computers and accessed through an interface programme
- When you installed MySQL database on your personal computer and access it directly on you PC, you are working with 1-tier system
- 1-tier system is used by systems developers like you.
- Another example of a 1-tier is the excel spread sheet saved on your PC

Two-tier/Server Database Systems



- These database system allow many users to access and share information
- Two-tier or groupware databases are installed and created on servers therefore by allowing many users to access data
- Client computers direct communication to the server database through an application interface.

Three-tier databases

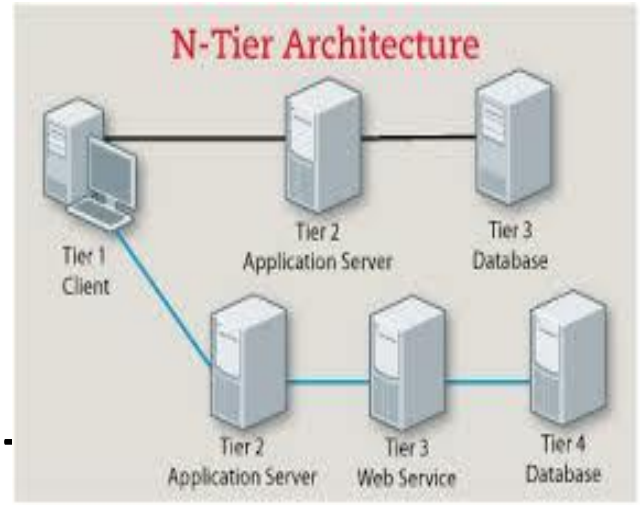


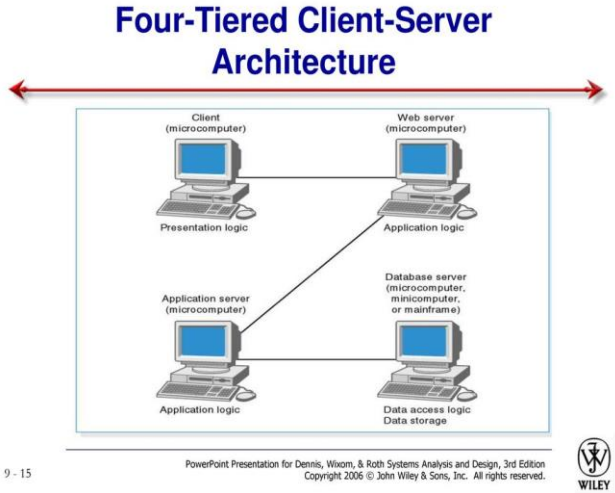
- T is database; client application, application server and Database server
- In this tier, database is installed on a server and the client computer access the database using the application program stored on another server

Three layers Cont.....

- ✓ Client layer
  - This layer is called the *presentation layer* which contains the user interface (UI) part of the application. The user interface is accessed from the client computers using a browser or any written application. This layer presents data to the user or takes queries from the users to the server application.
- ✓ Business layer
  - This is a server application which talks to the database on behalf of the client. The database understands this application not the client application. It gets queries or requests from the client and translates them and forwards the translation to the database so that the requested information can be retrieved.
- ✓ *Data layer-* This is the server database. The Data Access Layer contains methods to connect with database and to perform insert, update, delete, get data from database based on our input data.

N-tier Database System





- T… r d… architecture
- This is an extension of the three tier system
- Additional layers of are added to the system to improve scalability

End of Lecture