Tier Architecture

A web application would be designed according to the n-tier architecture where tiers are different layers of architecture. A tier is a logical separation between different components of the application. Tier architecture helps make modifications and updation of different components easy. It helps in assigning dedicated tasks and roles to each component.

For n=1, It is known as single-tier architecture/one-tier architecture
For n=2, It is known as a two-tier architecture
For n=2, It is known as a three-tier architecture
And so on.

Layers of a web application:

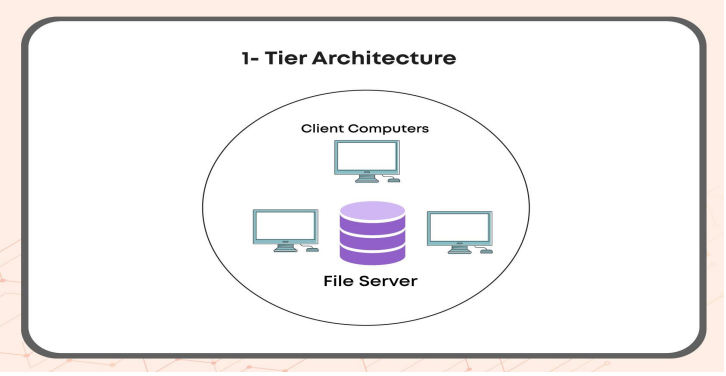
A. Visualisation Layer
B. Business Logic Layer
C. Data Storage Layer

The most common type of architecture is three-tier architecture.

One-Tier architecture:

One-tier architecture included storing all the software components and data on a single platform or server. One-tier architecture is when all the three layers of application including the visualisation layer, business logic layer and data storage layer are present in a single machine. It is similar to monolithic architecture. Because there are no network calls for the one-tier architecture, the network latency is minimum.

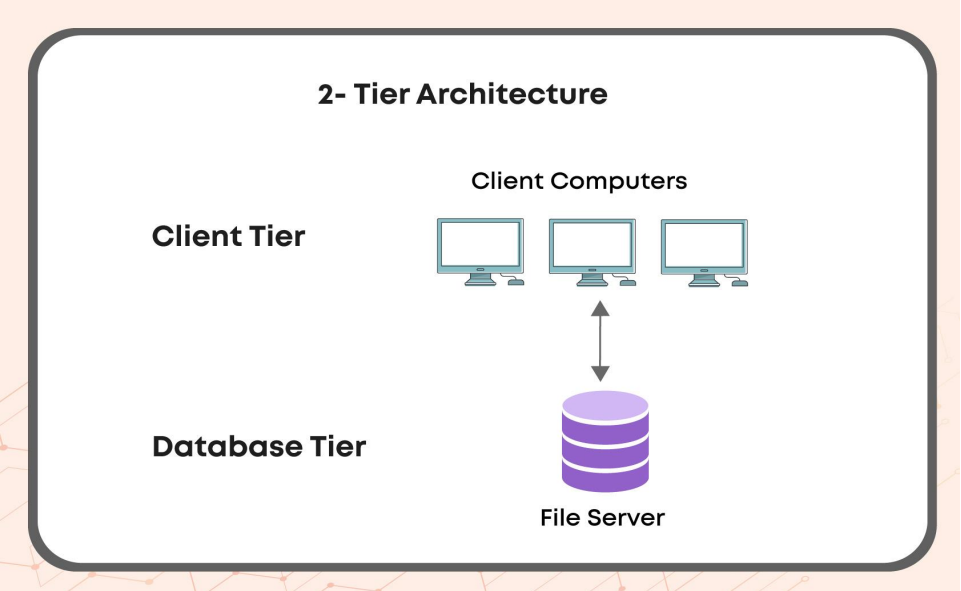
Example: Database in your local machine and accessing it using SQL queries.



Two-tier architecture:

The complete application is divided into two tiers. The first tier consists of the visualisation layer or the client tier. The second tier consists of the business logic layer and the data storage layer or the application/business logic tier.

Example: Client-Server architecture



Three-tier architecture:

It is the most common kind of architecture. The complete application is divided into three different tiers. The first tier is the frontend or client tier and consists of the visualisation layer. The second tier consists of the business logic layer involving processing and computation. The third tier is the data storage tier which includes reading and writing operations on the databases. Three-tier architecture takes less space at the client-side (Mobile apps, ATMs, website) as the logic and data are stored at separate servers. Hence, light apps will lead to more users willing to use the app.