CLIENT-SERVER REVIEWER

clients and servers reside in devices in the form of programs. A device can have clients at the same time, server programs. They can also reside on different computers in a network.

Client - is any program or machine that requests specific services from the server machine. A client may reside in your phone, laptop or tablet.

Services – the client requests for the server. e.g. file, print, fax, multimedia, or communication

Server - is a program or machine that provides requested services to the Client.

Network – the media where the requests and responses travel through.

Types of Servers

- **File server** – this server's main purpose is providing clients access to record within files from the server machine.
- **Print server** – this allows the printers to be accessible to computers in a network.
- **Application server** – this is specifically designed to run applications e.g. running a web application
- **Mail server** – this manages emails, messaging, and communication on large-scale
  networks.
- **Fax server** – provides the facility to send and receive faxes through a single network connection.
- **Web server** – this controls how clients access hosted files. At a minimum, this is an HTTP server. More info. HTTP will be discussed in the succeeding sections.
- **Database server** – provides access to data to clients in response to SQL requests.
- **Transaction server** – provides access to high-level functions and implements efficient transaction processing.

TYPES OF CLIENT SERVER

FAT CLIENT-SERVER - means that most of the computing would be done on the client side with a <mark>high processing power and resources.</mark>
- Gaming console
- High spec pc

THIN CLIENT-SERVER- A thin client, on the other hand, is a client device with <mark>minimal processing power and resources</mark>. It relies on a centralized server for most of the processing and resource management.
- Remote Desktop Service
- Web-Based Email

Client/Server Topologies
- Single client, single server
- Multiple clients, single server
- Multiple clients, multiple servers

Client/Server architectures
- **Two-tier** - The architecture of any client/server environment is by definition at least a two-tier system, the <mark>client being the first tier and the server being the second</mark>.
- **Three-tier -** the architecture is split into three: <mark>client, application server, and data server.</mark> The client still does the same functions as in two-tier.
- **N-tier -** a three-tier where <mark>the middle-tier is split into 2 or more tiers.</mark> The purpose of the middle tiers is for the business and transaction logics to be isolated from the first tier (GUI) and the last tier (Database processing).

Advantage/Disadvantage of Client/Server

Advantages
- Performance
- Data Integrity

- Enhanced Data Sharing
- Centralized/ Centralized Server
- Ease of use
- Reduced operating cost
- Reduced hardware cost
- Communication costs are reduced

Disadvantages
- Labor cost
- Hardware and Software cost
- Complexity