**Tutorial**

**1. Five Term**

**Client-Server Network**

A server, or network server, is a central computer that holds collections of data (databases) and programs for connecting or supplying services to PCs, workstations, and other devices, which are called clients. These clients are linked by a wired or wireless network. The entire network is called a client-server network.

**Cloud Computing**

Cloud Computing basically means that instead of storing your software and /or data on your own PC or your own company’s computers, you store it on servers on the internet.

**Productivity Software**

Productivity software – such as word processing programs, spreadsheets, and database managers -whose purpose is to make user more productive at particular tasks.

**Transistor**

A transistor is essentially a tiny electrically operated switch, or gate, that can alternate between “on” and “off” many millions of times per second.

**Trackball**

The trackball is a movable ball, mounted on top or side of as stationary device, that can be rotated using your fingers or palm.

**Web Portals**

A web portal, or simply portal, is a type of gateway website that functions as an “anchor site,” a major stating point, for users when they connect to the web.

**Machine Cycle**

Machine cycle, the CPU (1) fetches an instruction, (2) decodes the instruction, (3) executes the instruction, and (4) stores the result.

**2. :)**

**Processing Operation & Storage Operation**

Processing is the manipulation a computer does to transform data into information.

Primary storage, or memory, is the internal computer circuity (chips) that temporarily holds data waiting to be processed. Secondary storage, simply called storage refers to the devices and media that store data or information permanently.

**ISP and WISP**

Internet Service Provider (ISP) – a local, regional, or national organization that provides access to the Internet for a fee.

A wireless Internet service provider (WISP) enables user with computer containing wireless modems-mostly laptops, tablets, and smartphones-to gain access to the Internet. A WISP offers public wireless network services and Internet access WISPs typically install WI-FI wireless hotspots in airports, hotels, cafes, and other public business places.

**Custom Software & Proprietary Software**

Custom software is tailor-made software crafted by an individual or team of programmers for a particular function of business purpose.

Packaged software also called Proprietary Software, is copyrighted, mass-produced software that’s offered for sale in stores or on the web to a variety of users.

**Touch Screen & Multi-Touch Screen**

A touch screen is a display screen that has been sensitized to receive input from the touch of a finger.

A multi-touch screen is a display screen that allows two or more fingers or others gestures such as pinching motions to be recognized as input at any one time.

**Input Hardware & Output Hardware**

Input hardware consists of devices that translate data into form the computer can process.

Output hardware consists of devices that translate information processed by the computer into a form that humans can understand.

**Tutorial II**

**Intranets**

An intranet is an organization’s internal private network that uses the infrastructure and standard technology, protocols, and hypertext link of the public Internet and Web.

**Extranets**

Extranets are private intranets that connect not only internal personnel but also selected suppliers and other strategic parties via the public communications system.

**Client-Server Network**

A client-server network consists of clients, which are microcomputers that request data, and servers, which are central computers used to supply data.

**Peer to Peer Network**

In a peer to peer network, all microcomputers on the network communicate directly with one another without relying on a server.

**Satellite Radio**

Satellite radio is a radio service in which digital signals are broadcast from satellites to special radios, primarily in cars.

**HD Radio**

HD radio stands for hybrid digital radio, a technology that provides CD-quality sound and allows broadcasters to squeeze one analog and two digital stations on the same frequency.

**WAN**

A wide area network (WAN) is a communications network that covers a wide geographic area, such as a country or the world.

**MAN**

A metropolitan area network (MAN) is a communications network covering a city or a suburb.

**Podcasting**

Podcasting involves delivering Internet music, radio, or video from the Internet to a computer.

**Ethernet**

Ethernet is a network standard for linking all devices in a local area network that describes how data can be sent between computer and other networked devices usually in close proximity.

**Network Toplogies**

The layout, or shape, of a network is called a topology.

**Star Network**

A star network is one in which all microcomputers and other communications devices are directly connected to a central network switch.

**Ring Network**

A ring network is one in which all microcomputers and other communications devices are connected in a continuous loop.

**Bus Network**

In a bus network, all nodes are connected to a single wire or cable, called the bus. The bus has two endpoints, or terminators, which stop the network signal. Each communications device on the network transmits electronic messages to other devices.

**Tree Network**

A tree network is a bus network of star networks.

**Mesh Network**

A mesh network is based on the principle that each node has more than one connection to the other nodes so that message can take any possible shortest, easiest route to reach its destination.

**Tutorial III**

**Variety of Threats**

Human errors, Procedural errors, Software errors, “Dirty data” problems, Electromechanical problems, Natural hazards, Theft of hardware, Theft of software, Theft of intellectual property, Theft of time and services, Theft of information, Internet-related fraud, Crimes of malice: crashing entire system.

**The Qualities of Good Information**

Having good information is critical to the success of any organization.

* **Correct and verifiable**: This means information must be accurate and check-able.
* **Complete yet concise**: Complete means information must include all relevant data. Concise means it includes only relevant data.
* **Cost-effective:** This means the information is efficiently obtained and understandable.
* **Current:** Current means timely yet also time-sensitive, based on historical, present, or future information needs.
* **Accessible:** This means the information is quickly and easily obtainable.

**Programming**

A program is a list of instructions that the computer must follow to process data into information.

1. Clarify/define the problem – include needed output, input, and processing requirements.

2. Design a solution – use modeling tools to chart the program.

3. Code the program – use a programming language’s syntax, or rules, to write the program.

4. Test the program—get rid of any logic errors, or “bugs,” in the program (“debug” it).

5. Document and maintain the program – include written instructions for users, explanation of the program, operating instructions.

**What do the three principal components of database do?**

**A Data Dictionary**, also called a repository or database schema, is a document or file that stores the data definitions and descriptions of the structure of data used in the database.

**DMBS Utilities** are programs that allow you to maintain the database by creating, editing and deleting data, records and files.

**Report Generator:** program for producing an on-screen or printed document form all or part of a database.