Portable Computer

➢ A portable computer is a computer that comes with a keyboard and display own which can easily located or transported, Although less Convinate compared to notebook. They Have lower specifications and are not well suited for full time uses as they are less ergonomic, hiever, They take less space the talk then desktop computer and come with must features found on a desktop.

Advantage of Portable computer

i. Compared to other Mobile computing device or laptop, Portable computer make use of standard motherboard and also provide plug in slots for add in cards.
ii. Portability and flexibility to use in definite advantage for portable computer over desktop computer.
iii. Portable computer use less space than desktop computer and are smaller in size.
iv. Compared to desktop computer, the power consumed in less in case of portable computer and help in power and cost saving.
v. Compared to desktop computer, immediately is more pronounced in the case of portable computer

Disadvantage of portable computer

i. They have a lower specification then must desktop system.
ii. They are less ergonomic and are less suited for full time uses in most of the cases.
iii. Expansion is top and any repaired could prove costly.
iv. Must of portable computer are not upgradeable.
v. Compared to desktop system, they are less reliable mostly due to overheating probability and often runs slower.

Operating System of Portable Computer

It is a specialized hardware dependent computer program which is also operating system specific that enables another program typically an operating system or applications software package or computer program running under the operating system <u>kernel</u> to interact transparently with hardware device and usually.

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SMTP: - Switched to internal E-mail protocol
AOL: - American Online Inc.

➢ Meaning of online services:- A commercial **service** that provides access to **services** such as the **Internet**. (An online service is search engine which are help to provide through the online.).

➢ Examples are search engine, Cloud storage, Application service provider.

➢ An earlier organization that provided proprietary content online before the internet has offered to general online services such as **AOL (American online Inc.)** and CompuServe content a unique mix of database and resources available via dial up modems .

➢ If E-mail has provided, it could only be same to members of the same service. After the internet become was popular all the proprietary services provided web access to their content proprietary E-mail system were either switched to internet E-mail protocol (SMTP). Are there formats were routinely converted black and forth to internet format.

➢ The following online service predate provide, Internet explosion mid 1990's are:-

1. AOL: - (American online Inc.)   That used to provide variety of database. www.Aol.com
2. CompuServe information Service inc   it provides internet access, provided variety of database.   www.compuserve.com
3. Data Time corporation:- tit provide about the newspaper magazines and financial.   www.combiumlearning.com

Example of online Services are:-

1. Booking system
2. Training Course
3. Order Tricking
4. Feedback forms
5. Membership Management
6. Online shopping
7. Customer relationship management
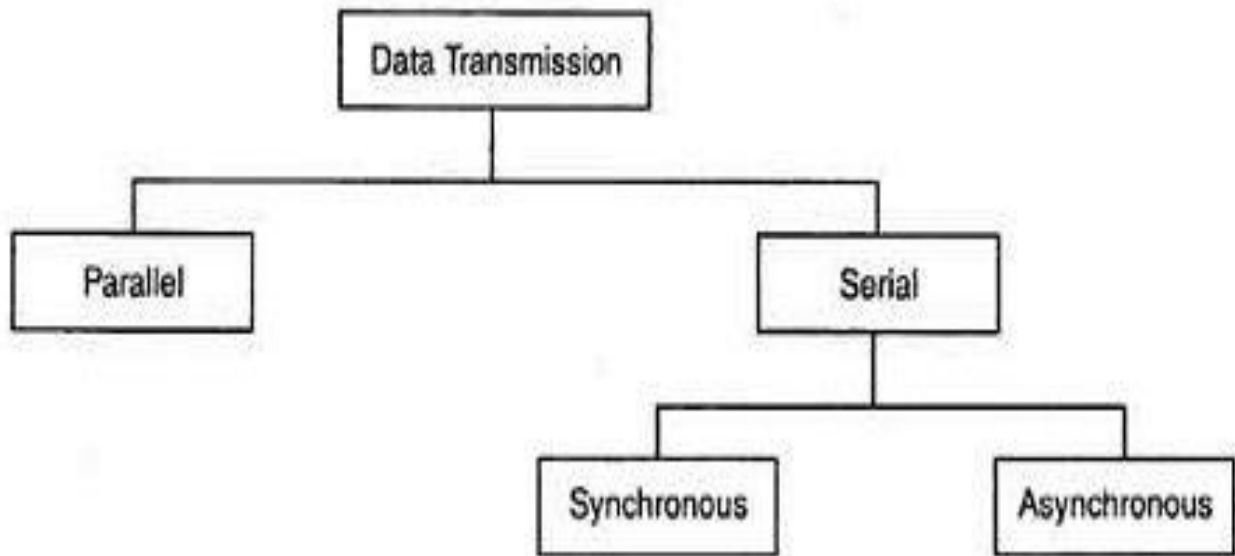
Types of Online services

1. Communication:- Email, Instant messaging,Blogs,Twitter etc.
2. Real time info:- Train tiimeables, News services.
3. E-commerce :-Online shopping, audition, Banking
4. Government :-E-voting, online tax retaking, revenue
5. Web Storage :-Google, Drop box
6. Entertainment :- Multi use games (PUB G)

Data Transmission

➢ Data transmission is the process of sending digital or analog data over a communication medium to one or more computing, Network, communication or electronic devices. It enables the transfer and communication of devices in a point to point, point to multi point, multi point to multi point.

➢ Data transfer can be analog or digital but each mainly reserved for sending and receiving digital data through signal.

➢ It works when a device are piece of equipment, such as computer, Intends to send a data to find a data to recipient (like server).

➢ The digital data originates from the source device in the form of discrete signals or digital bit streams.

➢ The data streams or signals are best over a communication medium such as physical copper wires, wireless carries and optical fibers per delivery to the destination or recipient device.

➢ More rural each outdoor signal can be based and paspinal.

➢ In addition to external communication the data transmission also may be internally carried to a device. Eg. Ram, Hard disk that sends data to processor is also form of data transmission.

➢ Data transmission is also known as digital transmission or digital communication

Types of Data Transmission are

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           ┌─────────────────────┐
           │  Data Transmission  │
           └──────────┬──────────┘
            ┌──────────┴───────────┐
    ┌───────────┐          ┌───────────┐
    │  Parallel │          │   Serial  │
    └───────────┘          └─────┬─────┘
                         ┌─────────┴─────────┐
                ┌──────────────┐      ┌──────────────┐
                │ Synchronous  │      │ Asynchronous │
                └──────────────┘      └──────────────┘
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Parallel: - (Multiple data bits) over multiple chances at same time.

Serial: - (used for long distances data transfer)

Synchronous: - (Used for high speed communication between computer)

Asynchronous: - (Send only me character at a time. i.e.   1 byte at a time)

Parallel Transmission: - within a computing or communication device, distance between different subunits are two short. Thus it is normal practice to transfer data between subunits used in separate wire to carry each bit of data. There are multiple wires connecting each subunit and data is exchanged using a parallel transfer mode. This mode of operation results in minimal (minimum) delays. In transferring each words.in parallel transmission, all the beats of data are transmitted simultaneously on separate communication lines. In order to transmit a bit, wires or lines are used thus each bit has its own line. On 'n' bits of one group are transmitted with each clock pulse from one device to another i.e multiple bits are send with each clock pulse parallel transmission is used for short distance communication.

Advantage of parallel transmission

➢ It is speedy way of transmitting data as multiple bits are transmitted simultaneously with a single clock pulse (one by one)

➢ It is costly method of data transmission as it requires 'n' lines to transmit 'n' bits at the same time.

Serial Transmission: - When transferring data between two physically separate devices, especially if the separation is more than a few km(Kilometer) for

reason of cost, it is more economical to use a single pair of lines. Data is transmitted as a single bit at a time using a fixed time interval for each. This mate of transmission is known as bit serial transmission. In serial transmission the various bits of data are transmitted serially one after the order. It requires only one communication line rather than 'n' lines to transmit the data from sender to receiver. thus, all the bits of data are transmitted on single line in serial fashion.

In serial transmission, single bits are between with each clock pulse serial transmission is used for long distance communication.

Advantage of serial transmission
➢ Use of single communication line reduces the transmission line cost by the factor of 'n' as compared to parallel transmission.

Disadvantage of serial transmission
➢ Use of conversion device at source and destination end may lead to increase in overall transmission cost.
➢ This method is slower as compared to parallel transmission as bits are transmitted serially one after to other.

Types of serial transmission
There are two types of serial transmission
1. Synchronous
2. Asynchronous

1) **Asynchronous: -** Asynchronous transmission sends only one character at a time where a character is either a letter of alphabet number, or control character i.e. it sends only one byte of data at a time. Bits Synchronous between two devices is made possible using start bit and stop bit.
Start bit: - indicates the beginning of data i.e. alerts the receiving to the arrival of new group of bits. A start bit usually (0) zero is added to the begging of each byte.
Stop bit: -stop bit include the end of data i.e. to the receiver know the byte is finished, one or more additional bits are appended to the end of the bit. This bits, usually 1^s are called stop bits

➢ Addition of start and stop increased the number of data bits hence more bandwidth is consumed in asynchronous transmission.

➢ There are idle (single) time between the transmission of different data bytes. This idle time is known as gap.

➢ The gap or idle time can be of varying intervals. This mechanism is called asynchronous, because at byte level sender and receiver need not to be synchnaized but within each byte. Receiver must be synchronized with the incoming bit stream.

Application of asynchronous transmission.

➢ **D**

Advantage: -

➢ This method of data transmission is cheaper in cost as compared to synchronous eg. If lines are short, asynchronous transmission is better, because line cost would be low and idle time will not be expensive.

➢ In the approach each individual character is complete in itself, therefore it character is corrupted during transmission, its successive and precedencies character will not be affected.

➢ It is possible to transmit signals from source having different bit rates.

➢ The transmission can start as soon as data byte to be transmitted become available moreover, this mode of data transmission is easy to employment.

Disadvantage of asynchronous transmission.