05 JUNE 2015 FRIDAY

Unit — IV

TATA HITACHI

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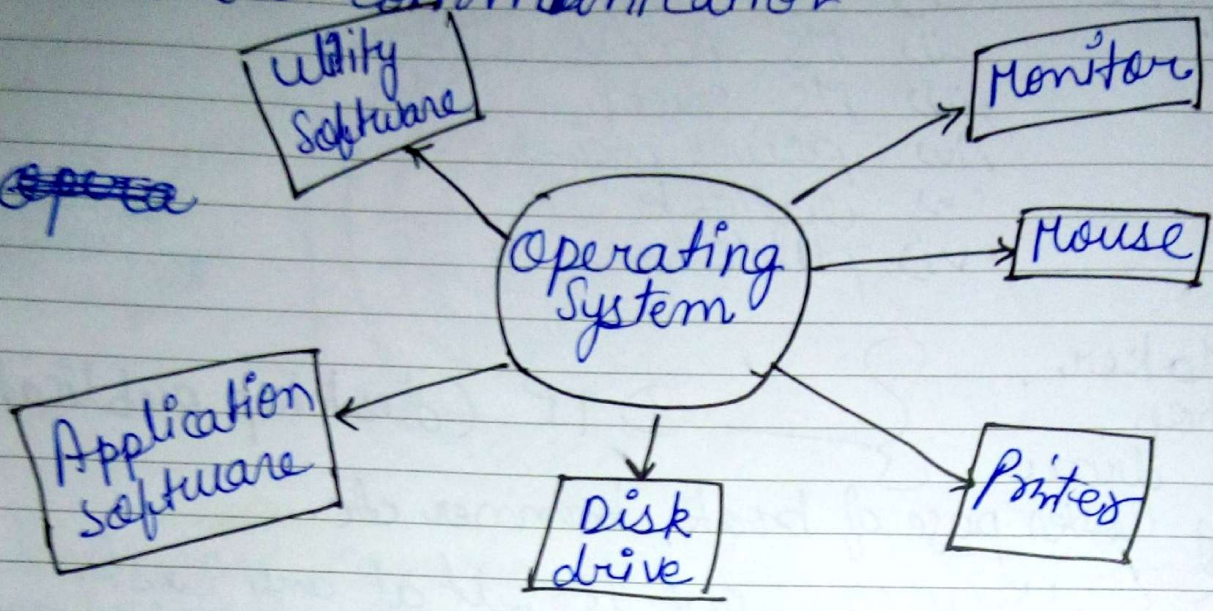
(i) Operating System (ii) Internet
(iii) Data communication



- An operating system is a set of software programme that controlled a computer and provides user and interface through which interaction with hardware is made possible
- Operating system control all the available hardware in the system and allocates req wise hardware to require process of the syste m thus operating act as a resource manager in computer
- Resource manager → A resource manager ope rating system controls all the available hardware in the computer system and allocate them to require a process of system It maintains proper allocation of re- sources to all process
- Interface → Operating system provides inter face to the user through which user give commands to the computer and perform desired action.

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It is the job of operating system to provide easy and interactive interface to the user. All other applications of user runs on this operating system.

* file system —

① ~~FAT-16~~ A file system is structure that computer to organize the data on storage medium (harddisk) Therefore when we install new harddisk in computer we needed to format it.

It using a file system which would be used data storage mechanism

There are many different type of file system having different structure and logic properties of speed, flexibility security, size and many more

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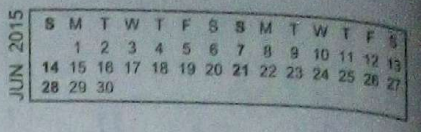
* Types of file system —

(1) FAT-16 (File allocation Table) -16
(2) FAT-32 (File allocation Table) -32
(3) NTFS (New technology file system)

* NTFS	FAT-16 / FAT-32
① ~~In window-xp~~ Defaut file system in window xp and NT.	① fat-16 not compatable with window-xp.
② Support for drives over 40GB files over GB	② FAT-16 has 8.3 character limitation
③ Allow extended file names	③ F-AT-32 has better more an interactive recovery utilities
④ Has a Seneraly Gripelad	④ Scandisk is very quick.



maintainance systems in check disk CHKDSK.

(5) Increase security with file incorruption.

(6) Comparison to reduce disk space

(7) User permission for files and folders.

file copies are undone If interrupted, clusture change is cleaned.

Small file are kept in master file table at the beginning of the drive.

(5) Justa space for the Os to read files.

(6) FAT-32 faster on drives less than 10 GB.

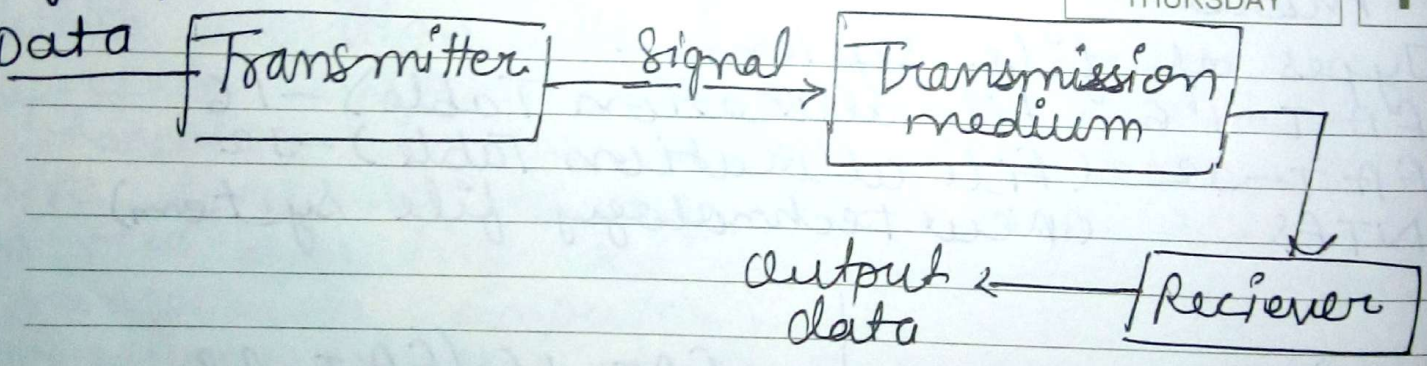
(7) FAT-16 clustre size is 32KB

(8) Clustre chain containing data from interrupt copies are marked as damage.

(9) master file tables are seperate from file.

✱ Data communication

Any information, raw material, video, text etc.



Block diagram of Data communication System.

In computer information system data are represented by binary information units produced and consumed in the form of 0's and 1's.

The efficiency data communication system depend on three fundamental characteristics —

(1) Delivery
(2) Accuracy
(3) Timeless

Data means the fact information statics the figures delivered by calculations or experimentation.
A data communication system may collect data from remote location through data communication circuits & then output processed result to remote location.
The different data communication techniques which are presently in widespread used to improve data communication techniques.
There are data communication jargons to connected with such as baudred, modems, lan, routers, Wan, TCP/IP (Transmission control protocol), ISDN, During selection of communication system. (Internet protocol)

1. Message
2. Sender

Components of data communication system →
① Message
② Sender
③ Reciever
④ Transmission medium
⑤ protocol

① Message →
It is the inf. or data to be communicated. It can consist of text, numbers, pictures, sound, video and any communication of these.

② Sender →
It is the device of computer that generates and send that message.

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Reciever →
It is the device or comp. that recieves the message. The location of receiver generaly diff. from the sender computer. The distance between sender and receiver generaly depend upon the types of network used in b/w.

Transmission Medium →
It is the channel or physical path through which the message is carried out from the sender to reciever the medium can be wired like twisted pair wire, coaxial cable, fiber optical wire,

Protocal →
It is a set of rule that govern the communication b/w the devices both sender and receiver follow same protocals to communicate with each other.

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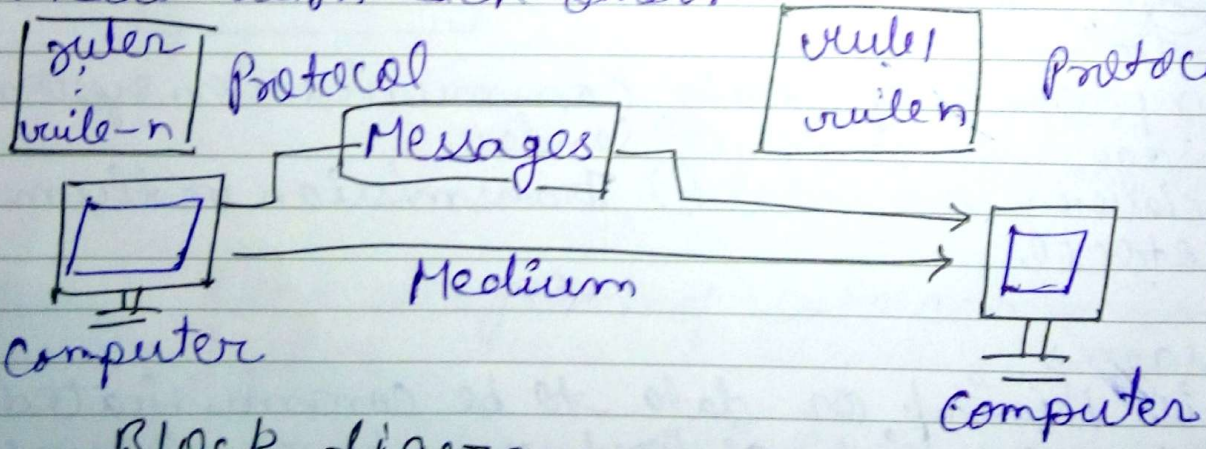
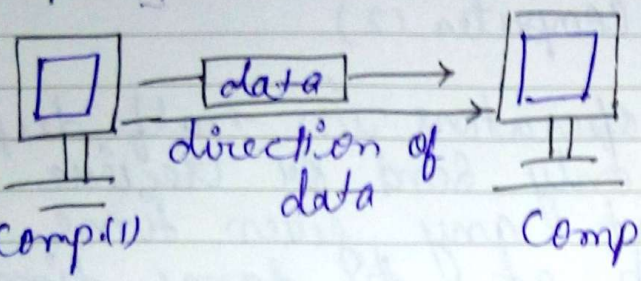


Block diagram—
Data communication system using protocal

Transmission mode →

1. Simplest mode (Send or recieve)
2. Half duplex mode (Send and recieve) at a time only one work held)
3. full duplex mode → (Send and recieve)
   → both works can done at a time

(1) Simplet mode →



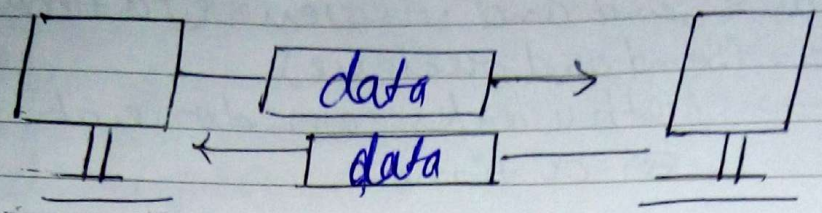
- In this type of transmission mode data can be sent only through one direction, In this technique communication is uni-direction.
- We cannot send a message back to sender.
- Unidirectional communication is done in simplex system

Example → (i) many fire alarm system work in the same
(ii) loudspeaker system (An announcer speaks into a microphone and his/her voice is sent through an amplifier and then to all the speakers)
(iii) Broadcasting
(iv) Communication between a computer and keyboard

(ii) Half Duplex mode →

In half duplex mode on system we can send data in both direction but it is done at a time i.e. both the connected device can transmit & recieve but not simultaneously when one device is sending to other can only recieve vice versa. The data is sent in one direction.

this is generaly use for relatively low speed transmission

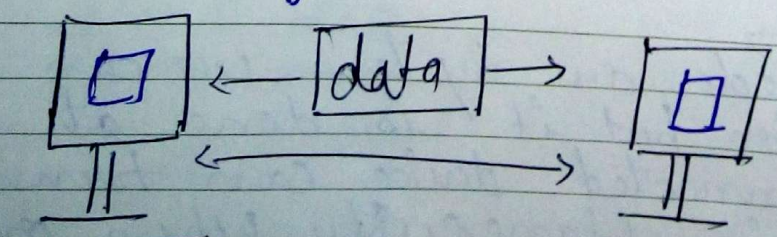


Computer (1) Computer (2)

Example → (i) Vockey talky operators in half duplex mode it can only send or recieve a transmission at any given time It Cannot do both at the same time.

(3) full duplex mode →

A full duplex system can transmit data simultaneously in both direction on transmission path full duplex method is used to transmit the data over a serial communication link to wire needed to send data over a serial communication link layer full duplex transmission the channel capacity is shared by both communicating device but all the times both the connected device can transmit and recieve at the same time. therefore it represent towely by directional system.



Computer1 Computer 2

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Example → Telephone network operate in full duplex mode when two persons talk on telephone line both can listen and speak simultaneously

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