Assignment - 1

Q.1 Explain the evolution of storage?

Ans:- 1) Punched Cards (18th Century) :- Punched cards were the earliest from of data storage, used to represent data in the form of holes punched into paper cards.

2) Magnetic Tape (1930s) :- Magnetic tape was developed in the 1930s and became a popular medium for storing audio recordings. It was later adopted for storing computer data, offering higher storage opens in a new window

3) Hard Disk :- Hard Disk (HDs) were introduced in 1956 and became the dominant from of data storage for decades.

4) Floppy Disks :- Floppy disk were introduced in 1971 and became a popular portables storage medium for personal computers. They were relatively low-capacity but offered easy transportability.

5) Solid-state Drives (SSDs) :- Solid state drives were first Introduced in the 1990s but became more widely adopted in the 2000s. They use flash memory to store data.

6) Cloud storage :- cloud storage emerged in the 2000s and has became increasingly popular in recent years. It allows users to store data remotely on servers operated by cloud providers.

Q.2 What is application and state different types of application?

Ans. There are many different types of applications.

1. Productivity application :- These applications help users to be more productive, such as word processors, spreadsheets, presentation software, and email clients.

2. Creative application :- These applications allows users to create content, such as photo editing software, video editing software, and music production software.

3. Entertainment application :- These applications provide entertainment, such as game, music players and video streaming services.

4. Communication application :- These applications allow users to communicate with others, such as messaging apps, video conferencing software, and social media platforms.

5. System applications :- These applications are essential for the operation of a computer system, such as operating systems, antivirus software, and file management software.

Q.3. Explain storage design based on application?

Ans. Storage design based on application is the process of selecting the appropriate storage technology for a particular application based on its specific requirements. This involves considering factors such as the type of data being stored, the required access patterns, the desired performance and availability, and the cost constraints.

Q.4 Explain RAID and its components?

Ans. RAID, which stands for Redundant Array of Independent Disks, is a way of storing the same data in different places on multiple hard disks or solid-state drives to protect data in the case of a drive failure. Raid is a technique that makes use of a combination of multiple disks instead of using a single disk for increased performance.

The components include

1) Disk Drives
2) RAID controller
3) RAID levels:
   i) RAID 0 (stripping)
   ii) RAID 1 (Mirroring)
   iii) RAID 5 (stripping with parity)

(v) RAID 10 (stripping and mirroring)

a) stripping
5) Mirroring
6) Parity
7) Hot spare
8) Capacing and performance conside.

Q.5 Explain the raid technique and level ?

Ans. RAID Technique.

1) stripping (RAID 0)

Data is divided into stripes or block is written to a separate disk drive. This enhances performance as multiple drives can work in parallel to read or write data.

2) Mirroring (RAID 1)