19CSB201 - OPERATING SYSTEMS

UNIT IV

1. **Distinguish file from dictionary.**

   A file is any kind of computer document whereas a directory is acollection of files and folders.

2. **Define C-SCAN scheduling**

   The elevator algorithm (also SCAN) is a disk scheduling algorithm to determine the motion of the disk's arm and head in servicing read and write requests.

   This algorithm is named after the behaviour of a building elevator, where the elevator continues to travel in its current direction (up or down) until empty, stopping only to let individuals off or to pick up new individuals heading in the samedirection.

3. **List the various file attributes.**

   A file has certain other attributes, which vary from one operating system to another, but typically consist of these: Name, identifier, type, location, size, protection, time, and date and useridentification

4. **What are the functions of Virtual File System (VFS) layer infile system implementation?**

   A virtual file system (VFS) or virtual file system switch is an abstraction layer on top of a more concrete file system. The purpose of a VFS is to allow client applications to access different types of concrete file systems in a uniform way. A VFScan, for example, be used to access local and network storage devices transparently without the client application noticing the difference.

5. **What is a file?**

   A file is a named collection of related information that is recorded on secondary storage. A file contains either programs or data. A file has certain "structure" based on its type.

6. **What are the various file operations?**
   The six basic file operations are

   Creating a file
   Writing a file
   Reading a file
   Repositioning within a file
   Deleting a file

   Truncating a file

7. **What are the different accessing methods of a file?**
   The different types of accessing a file are:

   Sequential access: Information in the file is accessed sequentially

   Direct access: Information in the file can be accessed withoutany particular order.

   Other access methods: Creating index for the file, indexedsequential access method (ISAM) etc.

8. **Define Directory.**

   The device directory or simply known as directory records information-such as name, location, size, and type for all files onthat particular partition. The directory can be viewed as a symboltable that translates file names into their directory entries.

9. **Determine the most common schemes for defining the logicalstructure of a directory?**

   The most common schemes for defining the logical structure ofa directory
   Single-Level Directory
   Two-level Directory
   Tree-Structured Directories
   Acyclic-Graph Directories
   General Graph Directory

10. **What are the allocation methods of a disk space?**
    Methods of allocating disk space which are widely in use are
    a. Contiguous allocation
    b. Linked allocation
    c. Indexed allocation

11. List various layers of a file system.<u>Ans:</u>

The file system is composed of many different levels. Each levelin the design uses the feature of the lower levels to Creating newfeatures for use by higher levels.

Application programsLogical file system
File-organization moduleBasic file system
I/O control Devices

12. **Define seek time and latency time.**
    The time taken by the head to move to the appropriate cylinder or track is called seek time. Once the head is at right track, it must wait until the desired block rotates under the read-write head. This delay is latency time.