

## Section 1

Answer  
Question 10

What do you mean by caching, spooling and error handling explain in details?

Explain FCFS, SCAN & CSCAN scheduling with example.

Answer:- Caching (Caching) is the process of storing data in cache.

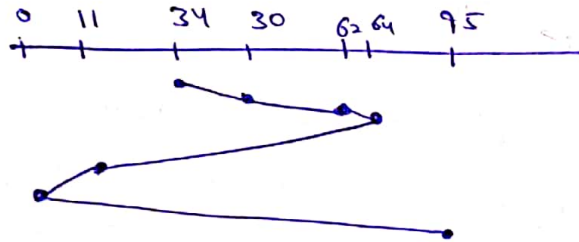
A cache is a temporary storage area. For example the files you automatically request by looking at a web page are stored on your hard disk in a cache subdirectory under the directory for your browser when you return to a page you have recently looked at, the browser can get those files from the cache rather than the original server, saving you time and saving the network the burden of additional traffic.

Spooling :- Spooling is an acronym for simultaneous peripheral operations on line. Spooling refers to putting data of various I/O jobs in a buffer. The buffer is a special area in memory of hard disk which is accessible to I/O devices.

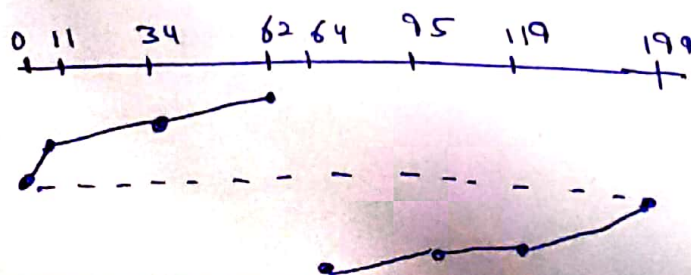
- OS handles I/O device data spooling as devices have different data access rates.
- OS maintains the spooling buffer which provides a waiting station where data can rest while the slower device catches up.

Error handling: Error handling refers to the response and recovery procedures from error conditions present in a software application. In other words, it is the process comprised of anticipation, detection and resolution of application errors, programming errors or communication errors. Error handling helps in maintaining the normal flow of program execution. In fact, many app - face numerous design challenges when considering error handling techniques.

1. FCFS - First come - First serve - All incoming requests are placed at the end of the queue. Whatever number that is in the queue will be the next number served.



2. SCAN - This approach works like an elevator does. It scans down towards the nearest end and then when it hits the bottom it scans up servicing the requests that it didn't get going down. If a request comes in after it has been scanned it will not be serviced until the process comes back down or moves back up.



3. C-SCAN - CScan works just like the elevator to some extent. It begins its scan toward the nearest end and works its way to the end of the system. Once it hits the bottom or top it jumps to the other end and moves in the same direction.

