

Write a program that implements the following disk-scheduling algorithms:

- I. FCFS
- II. SSTF
- III. SCAN
- IV. C-SCAN
- V. LOOK

Your program will service a disk with 10,000 cylinders numbered 0 to 9,999. The program will generate a random series of 1,000 cylinders requests and service them according to each of the algorithms listed above. The program will be passed the initial position of the disk head (as a parameter on the command line), and report the total amount of head movement required by each algorithm. Your program should show the result in a table.

You may use any programming language and add comments to your code.

Submit the following:

- I. Your complete code with all comments
- II. Screenshot of the output
- III. Assignment report which will answer the following questions:
  - 1. Each algorithm definition
  - 2. The result (total amount of head movement) for each one algorithm
  - 3. Which algorithm is the most efficient one? Why?