Gokhale Education Society's

R.H.Sapat College of Engineering Management Studies and Research, Nashik-422005

Department of Computer Engineering

System Programming And Operating System

Problem Based Learning

Class: TE Computer

Division: A

Faculty: V.S. Nikam

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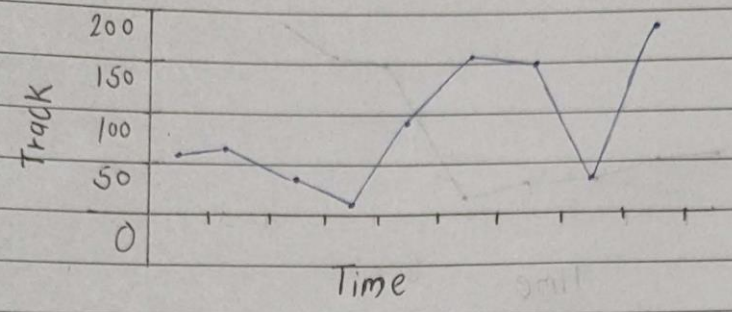
Problem Statement:

Consider the disk access requests given as 55, 58, 39, 18, 90, 160, 150, 38, 184 where starting head position is 100. Calculate average seek time using FCFS, SSTF, SCAN, C-SCAN disk scheduling policies and show which policy performs better.

1. FCFS Scheduling.

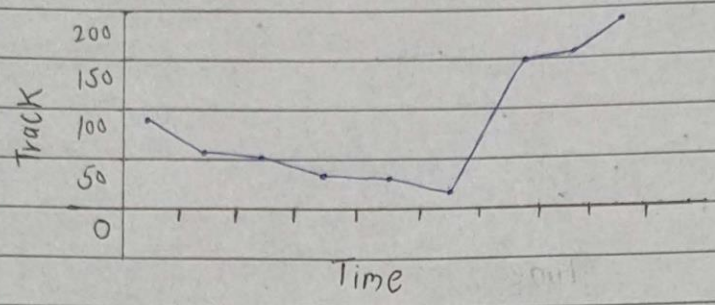


Starts at Track - 100

Next Track Accessed	# of Tracks Traversed
55	45
58	3
39	19
18	21
90	72
160	70
150	10
38	112
184	146

Average seek length → 55.3

2. SSTF Scheduling

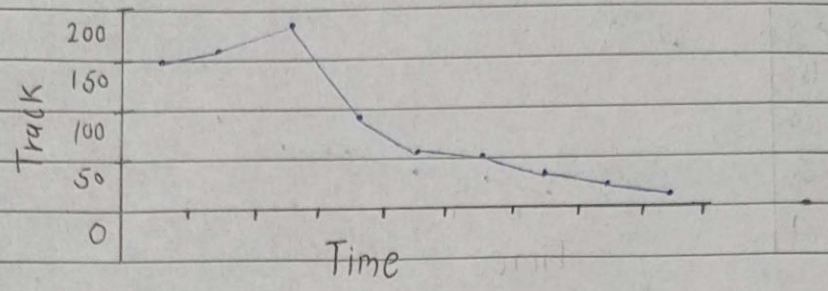


Starts at Track 100

Next Track Accessed	# of Tracks Traversed
90	10
58	32
55	3
39	16
38	1
18	20
150	132
160	10
184	24

∴ The average seek length → 27.5

3. SCAN Scheduling

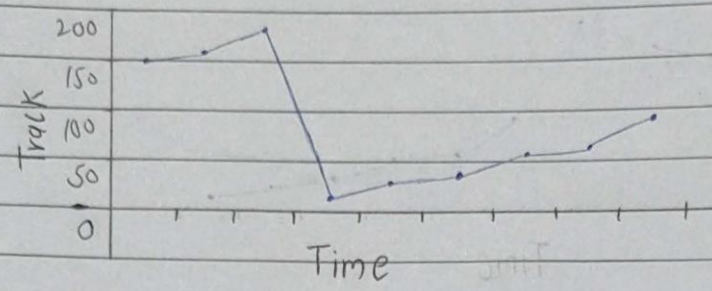


Starts at Track 100

Next Track Accessed	# of Tracks Traversed
150	50
160	10
184	24
90	94
58	32
55	3
39	16
38	1
18	20

∴ Average Seek length → 27.8

4. C-SCAN scheduling



starts at Track 100

Next Track ~~To~~	# of Tracks Traversed
150	50
160	10
184	24
18	166
38	20
39	1
55	16
58	31
90	32

∴ Average seek length → 27.8

Answer:

SSTF is popular because of the short seek time length while SCAN and C-SCAN are better for systems with greater disk acitivity.