* tito fifo page replacement algorithm with a page frame size of 3 and the reference string: -133230970133

of peaking total

D.	D Charles and	12881/1 273
Reference	Page Frame	Page Fault
1	0	0
	13	yes
3		yes
3	13	ИО
2	132	yes
3	132	No
0	032	yes
9	092	yes
7	097	yes
0	097	yes No
	197	·yes
3	137	yes
3	1 37	NO

Total page fauts: 8/1
Total page hits: 4/1

* Optimal

Optimal page replacement algorithm with a page frame 8ize of 3 and the Reference 8tring: 133230970133

pol ways

Reference	Page Fra	me	Page Fault
1 3	Thurs 1 78	1	yes
3		31	yes
2		231	yes
3		231	No
0	14	031	yes
7	18	091	yes
0		071	yes
1		071	N0 N0
3		371	yes
3		371	No

Total Number of hits: 5 Total Number of page fautly: 7

* LRU (counter implementation)

LRU (wunder Implementation) page replacement algorithm with a page frame of 3 and one reference string:

Reference	Page	Frames	10'	Page Jaults
1	0		1	yes
3			31	yes
3 2		114	231	No yes
3			231	No
0			230	yes
q			930	der
7			970	No
0			970	yes
3			130	yes
3			130	No
3		ol	100	0.3

Total page faults: 8

* LRU (Stack 9mplementation)

LRU (Stack Implementation) page replacement algorithm with a page frame of 3 and Reference 8thing: 133230970133

Reference	Page	Grame	Page fault.
133230970133	0	111111 2331111 222222000 0970133	222222222222222222222222222222222222222

Total page faults: 8

* Second Chance:

Second chance page replacement algorithm with page frame size of 3 and Reference String: 133230970133

rest print 110, 51 i or through

	The Party of Line	14	10 10 10 10 10
Reference	Page Frame	Page fault	, 1)2,3
1	1	yes	
3	31	yes	
3	3 1	NO	1,101
2	231	yes	
3	231	No	which told
0	230	yes	1 - 101, 9
9	930	yes	
111111	937	yes	
0	901	yes	
1	101	yes	
3	103	yes	
3		No	
	a bearing		

Total page faults: 9/ address to the first transport fribang the up Gla Given:

The disk drive has 5,000 ybinders, numbered 0 to 4,999.

The current head position is at cylinder 2,150.

The previous request was at cylinder 1,805.

The flueue of pending request in FIFO order is:

2,069, 1,212, 2,296, 2800, 544, 1,618, 356,

1,523, 4,965, 3,681.

* FCFS

. Total distance travelled:

|2,150-2,069|+|2,069-1,212|+|1,212-2,296|+ |2,296-2,800|+|2,800|+|5,618|+ |1,618-356|+|356-1,523|+|1,523-4,965|+|4,965-3,681|

- =81+857+1,084+504+2,256+1,074+1,074+1 1,262+1,167+3,442+1,284= =12,011 cylinders
- The total distance the disk own moves to satisfy out the pending request using the FCFS disk-Scheduling algorithm is 12,011 yuinders.

S

356

6

* SSTF

- · Total distance travelled:
 - 12,150-2,069 | + 12150 1618 | + 11618 1523 | + 11,523 1,2121 + 1,212 - 544 + | 544 - 356 | + | 356 - 2,296 | + | 2,296 - 2800 |
 - + | 2,800 3,681 | + | 3,681 4965 |
- = 81 +532 +95 + 311 + 668 + 188 + 1940 + 504 + 881+ 10 Un pl 1 284 5 man alla pella pell = 6,484 y Grders 116 pine 112 property

 - . The total distance the disk own moves to satisfy all the perding request using the SSTF disk-Scheduling algorithm is 6,484 winder

* SCAN - Storded from workers position (2, 150) then the disk own moves outword to manimum cylinder

4,999 outward movement: 2,296, 2,800, 2,965, 3,681, 4,965 Inward movement: 2,069, 1,618, 1,523, 1,212, 544, 356 Total distance: 14999 - 2,1501 + 14999 - 3561

= 7,492

accombined to the star Service and I the 1th size with the

The total distance the dist arm moves to satisfy all the pending request using the SCAN algorithm is 7,492 yunders

* LOOK

Storaing postion: (2150)

minimum 9 number direction: 4965

Outword movement:

Total distance travelled: 46

14965-2,1501+14965-36561

= 6,824 whinders

realing request using the \$600k disk-scheduling algorithm is 6,824 whinders

* C-SCAN

Starting position: 21,50
move disk own to the manimum out word: 4,999
move disk arm to the minimum inward o: 0
The distance travelled = 14,999 - 2,1501 + 14,999-01+

| 336-0| = 8204 whinders

The total distance disk arm moves to satisfy all the pending request using the C-Scan disk-scheduling algorithm is

* C-LOOK

Starting position: 2,150

The distance travelled: 14965-2,150/+/4965-356/

+ 12,069-3561 = 9,164 cy linder

In this case the disk arm moves to the manimum outward: 4965 then to the minimum inward 356 to the last service request: 2069.

The total distance the disk own moves to satisfy on the pending request using the c-Look disk sceduling algorithm is: 9164 cylinder.