# CS- 342
# OPERATING SYSTEMS

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**REPORT**

# Introduction

In this experiment, i have implemented the 6 different disk scheduling algorithms to observe the head movement counts by different head positions and input files. My program also runs without an input file, it generates random numbers.

### Test Case 1: Random Order of Cylinders(head 53)

This experiment shows FCFS is not a good choice among all. SSTF handle this kind of request more efficient in every manner . Order of requests are not important for SSTF.

### Input File:

1 3
2 6
3 15
4 78
5 97
6 45
7 99
8 11
9 7
10 105

### Outputs:

FCFS: 1265 SD: 448.920260
SSTF: 443 SD: 39.807035

### Test Case 2: Decremental Order:(head 53)

This experiment shows FCFS is not a good choice. SSTF handle this kind of request more efficient in every manner . Order of requests are not important for SSTF,

First_come_first_serve  = 337 SD: 116.487911

SSTF  = 247 SD: 80.601144

### Test Case 3: Incremental Order:

In this experiment , requests start from beginning of disk and go to end of it in order. Both algorithms give same result in this kind of requests. SD is same for FCFS, SSTF.

1 10

2 20

3 30

4 40

5 50

6 60

7 70

8 80

9 90

10 100

## Output:

Start index: 53

First_come_first_serve  = 113 SD: 30.112567
SSTF  = 113 SD: 30.112567

### Test Case 4: Cylinder Rotates in 'Z' Pattern:

In this experiment, requests make a 'Z' pattern. SSTF is the best choice. SD is lower for SSTF.

**Input file:**
1 100

2 5

3 200

4 15

5 100

6 20

7 50

8 10

9 400

**Output:**

Start index: 53

First_come_first_serve = 757 SD: 309.131355
SSTF = 243 SD: 66.484961