Text

Description automatically generated

Figure 1:Output when servicing disk 0

Graphical user interface, text

Description automatically generated

Figure 2:Output when servicing disk 5000

Graphical user interface, text

Description automatically generated

Figure 3:Output when servicing disk 9999

Text

Description automatically generated

Figure 4:Output when input is invalid

III.

1. FCFS stands for First-Comes First Served algorithm. Like queue theory, FCFS is an operating system scheduling algorithm that automatically executes queued requests and processes in order of their arrival. It is the simplest and easiest CPU scheduling algorithm. SCAN algorithm, also known as elevator algorithm, is a disk scheduling algorithm that starts from one end of the disk and moves towards the other end, servicing requests in between one by one and reach the other end. C-SCAN is called circular SCAN scheduling. It is a modified version of SCAN disk scheduling algorithm designed to provide a more uniform wait time. It deals with the inefficiency of SCAN algorithm by servicing the request more uniformity.
2. The result of each algorithm is on cylinder 0. The result of FCFS is 3218043 total head movement while SCAN is 9981 total head movement and C-SCAN is 19955 total head movement.
3. SCAN is the most efficient algorithm. Not only does the result of this program show that but because SCAN scheduling algorithm services all requests in both the direction while C-SCAN scheduling algorithm services the request in one direction only.