NAME: G. GANESH

REG NO: 192373008

EXERICSE-37

Construct a C program to simulate the First Come First Served disk scheduling algorithm.

AIM:

To design a C program that simulates the First Come First Served (FCFS) disk scheduling algorithm.

Algorithm:

1. Input the number of disk requests and the initial head position.
2. Accept the sequence of disk requests.
3. Process each request in the order it arrives (FIFO).
4. Calculate the total seek time by summing the absolute differences between consecutive requests.
5. Output the total seek time and the sequence of requests serviced.

Procedure:

1. Define an array to store disk requests.
2. Take inputs for the number of requests and the initial head position.
3. Traverse the array, calculate the seek time between consecutive requests, and sum them up.
4. Display the seek sequence and the total seek time.

Code:

```
#include <stdio.h>
#include <stdlib.h>
void fcfs(int requests[], int n, int head) {
   int totalSeekTime = 0, current = head;
   printf("Seek Sequence: %d", head);
   for (int i = 0; i < n; i++) {
      totalSeekTime += abs(requests[i] - current);
      current = requests[i];
      printf(" -> %d", current);
```

```
    }
    printf("\nTotal Seek Time: %d\n", totalSeekTime);
}
int main() {
    int n, head;
    printf("Enter the number of disk requests: ");
    scanf("%d", &n);
    int requests[n];
    printf("Enter the disk requests: ");
    for (int i = 0; i < n; i++) {
        scanf("%d", &requests[i]);
    }
    printf("Enter the initial head position: ");
    scanf("%d", &head);
    fcfs(requests, n, head);
    return 0;
}
```

Result:

The program successfully simulates the FCFS disk scheduling algorithm, displaying the seek sequence and total seek time.

Output: