Vivek Saxena

classmate
Date
Page

(1)

Name :- Vivek Saxena  Univ. Roll No. :- 2023114

Student ID :- 20051028  Date :- 27-Aug-2021

Course :- BSC IT  Branch :- Dehradun

Semester :- II  Section :- 2B.

Paper :- Operating System  Code :- PBI-202

Q2 :- Suppose that a disk drive has 100 cylinder - - - - - moves.

Ans :-

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int RQ[100], i, j, n, totalheadmoment=0, initial, size,
    move;
    printf("Enter the number of Request \n");
    scanf("%d", &n);
    printf("Enter the Requests sequence \n");
    for(i=0; i<n; i++)
    scanf("%d", &RQ[i]);
    printf("Enter initial head position \n");
    scanf("%d", &initial);
    printf("Enter total disk size \n");
    scanf("%d", &size);
    printf("Enter the head movement direction for high 1
        and for low 0 \n");
    scanf("%d", &move);
```

(v) Arrays

```
for(i=0; i<n; i++)
{
    for(j=0; j<n-1; j++)
    {
        if(RQ[j]< RQ[j+1])
        {
            int temp;
            temp = RQ[j];
            RQ[j] = RQ[j+1];
            RQ[j+1] = temp;
        }
    }
}

int index;
for(i=0; i<n; i++)
{
    if(initial < RQ[i])
    {
        index = i;
        break;
    }
}

if(move == 1)
{
    for(i= index; i<n; i++)
    {
        Total head movement = Total head movement +
```

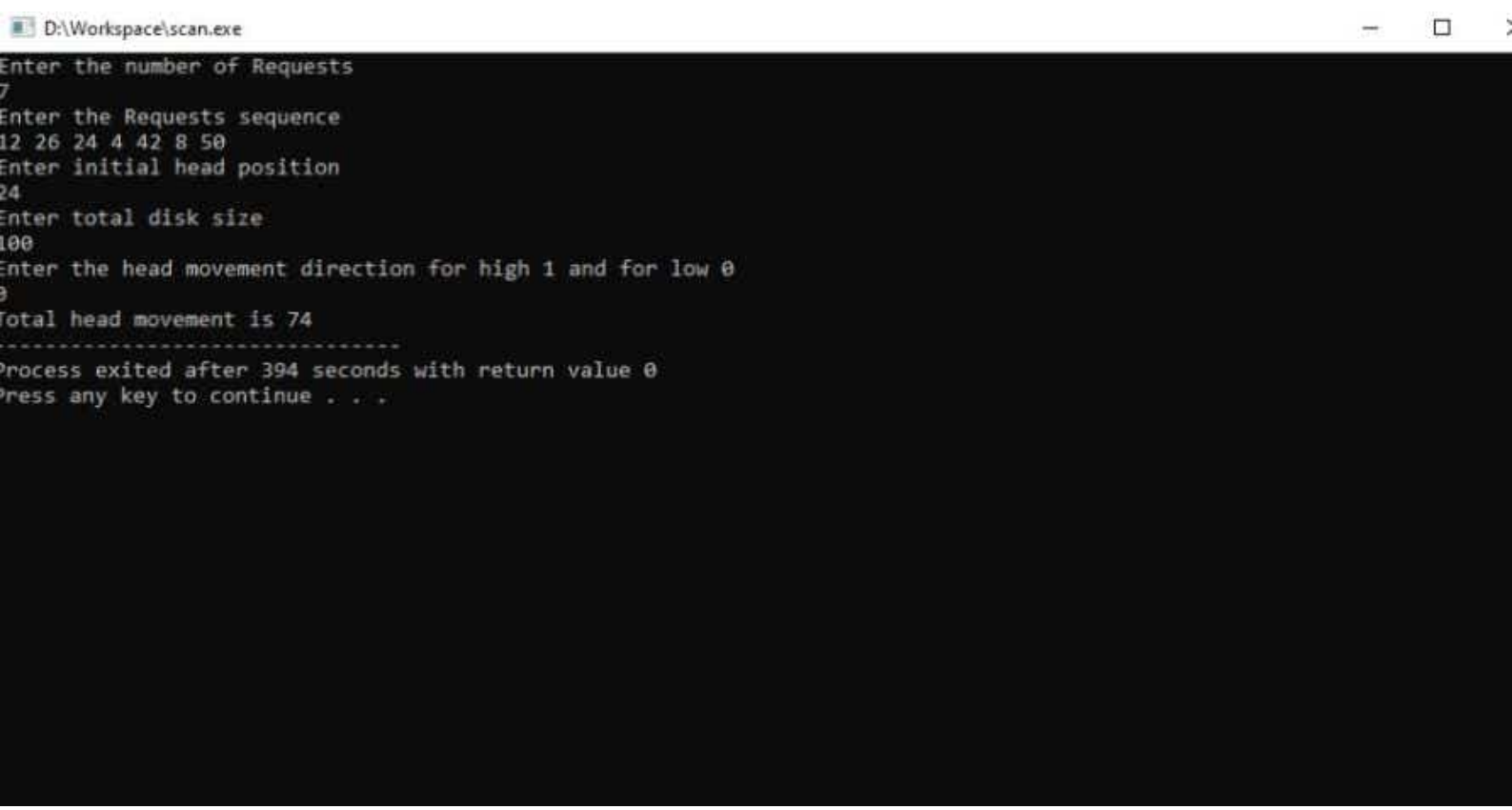
```
        totalheadmovement = totalheadmoment + abs(RQ[i] - initial);
        initial = RQ[i];
    }

totalheadmovement = totalheadmovement + abs(size - RQ[i-1] - 1);
initial = size - 1;

for(i = index - 1; i >= 0; i--)
{   totalheadmoment = totalheadmoment + abs(RQ[i] -
                                            initial);
    initial = RQ[i];
    }
}

else
{
    for(i = index - 1; i >= 0; i--)
    {   totalheadmoment = totalheadmoment + abs(RQ[i] - initial);
        initial = RQ[i];
    }
totalheadmoment = totalheadmoment + abs(RQ[i+1] - 0);
initial = 0;
for(i = index; i < n; i++)
{   totalheadmoment = totalheadmoment + abs(RQ[i] -
                                            initial)
    initial = RQ[i];
} }
```

Reverse

printf("Total head movement is %d", totalheadmovement);

return 0;

}


D:\Workspace\scan.exe
Enter the number of Requests
7
Enter the Requests sequence
12 26 24 4 42 8 50
Enter initial head position
24
Enter total disk size
100
Enter the head movement direction for high 1 and for low 0
0
Total head movement is 74
--------------------------------
Process exited after 394 seconds with return value 0
Press any key to continue . . .