

Program: Shortest Seek Time First By Niyati Savant

Code:

```
#include<stdio.h>

#include<stdlib.h>

struct track
{
    int track_no;
    int covered;
};

void main()
{
    printf("Niyati Savant--SSTF \n");
    struct track track_order[20];
    int i,no_tracks,shortest_diff,min,close,x=0,head_movement=0,curr_head;

    printf("Enter the number of Tracks: ");
    scanf("%d",&no_tracks);
    for(i=0;i<no_tracks;i++)
    {
        printf("Enter Track %d :",i+1);
        scanf("%d",&track_order[i].track_no);
        track_order[i].covered=0;
    }
    printf("Enter the cuurent Head position:");
    scanf("%d",&curr_head);

    /*track_order[0].track_no=82;
    track_order[1].track_no=170;
    track_order[2].track_no=43;
    track_order[3].track_no=140;
```

```
track_order[4].track_no=24;
track_order[5].track_no=16;
track_order[6].track_no=190;*/
```

```
while(x!=no_tracks)
{
    shortest_diff=1000;
    for(i=0;i<no_tracks;i++)
    {
        if(track_order[i].covered==0)
        {
            min=abs(curr_head-track_order[i].track_no);
            if(min<shortest_diff)
            {
                shortest_diff=min;
                close=i;
            }
        }
    }
    head_movement += shortest_diff;
    track_order[close].covered=1;
    curr_head=track_order[close].track_no;
    printf("Track chosen: %d & The difference : %d \n",track_order[close].track_no,shortest_diff);
    x++;
}
printf("The total Head Movement is %d",head_movement);
}
```

Output:

Niyati Savant--SSTF

Enter the number of Tracks: 7

Enter Track 1 :82

Enter Track 2 :170

Enter Track 3 :43

Enter Track 4 :140

Enter Track 5 :24

Enter Track 6 :16

Enter Track 7 :190

Enter the cuurent Head position:50

Track chosen: 43 & The difference : 7

Track chosen: 24 & The difference : 19

Track chosen: 16 & The difference : 8

Track chosen: 82 & The difference : 66

Track chosen: 140 & The difference : 58

Track chosen: 170 & The difference : 30

Track chosen: 190 & The difference : 20

The total Head Movement is 208