FCFS-->

```
#include<stdio.h>
#include<stdlib.h>

int no_of_tracks;


int main(){
   printf("Enter the number of request tracks:");
   scanf("%d",&no_of_tracks);
   int sec_track[no_of_tracks][2];
   for(int i=0;i<no_of_tracks;i++){
      printf("Enter the %d(th/st/nd/rd) track: ",i+1);
      scanf("%d",&sec_track[i][0]);
   }
   int head;
   printf("Enter the head: ");
   scanf("%d",&head);
   for(int i=0;i<no_of_tracks;i++){
      sec_track[i][1]=abs(head - sec_track[i][0]);
      head=sec_track[i][0];
   }

   int total_seek_time;
   for(int i=0;i<no_of_tracks;i++){
      total_seek_time+=sec_track[i][1];
   }

   printf("Next track to be traversed  No. of tracks to be traversed\n");
   for(int i=0;i<no_of_tracks;i++){
      printf("\t\t%d\t\t",sec_track[i][0]);
      printf("\t\t%d\t\t",sec_track[i][1]);
      printf("\n");
   }

   float avg_s_time = (float)total_seek_time/no_of_tracks;
   printf("Average seek time is %.2f ",avg_s_time);
   return 0;
}
```

CSCAN-->

```
#include<stdio.h>
#include<stdlib.h>

int no_of_tracks;


int main(){
   printf("Enter the number of request tracks:");
   scanf("%d",&no_of_tracks);
   int sec_track[no_of_tracks][2];
   for(int i=0;i<no_of_tracks;i++){
      printf("Enter the %d(th/st/nd/rd) track: ",i+1);
      scanf("%d",&sec_track[i][0]);
```

```
}
for(int i=0;i<no_of_tracks;i++){
   sec_track[i][1]=0;
}
int head;
printf("Enter the head: ");
scanf("%d",&head);


for(int i=0;i<no_of_tracks-1;i++){
   for(int j=0;j<no_of_tracks-i-1;j++){
      if(sec_track[j][0]>sec_track[j+1][0]){
         int temp  = sec_track[j][0];
         sec_track[j][0]=sec_track[j+1][0];
         sec_track[j+1][0]=temp;
      }
   }
}
int flag = 0;
for(int i=0;i<no_of_tracks;i++){
   if(sec_track[i][0]>head){
      flag = i;
      break;
   }
}
int j = 0;
while(flag<no_of_tracks){
   int temp=sec_track[j][0];
   sec_track[j][0] = sec_track[flag][0];
   sec_track[flag][0]=temp;
   flag++;
   j++;
}
printf("Next track to be traversed  No. of tracks to be traversed\n");
for(int i=0;i<no_of_tracks;i++){
   printf("\t\t%d\t\t",sec_track[i][0]);
   printf("\t\t%d\t\t",sec_track[i][1]);
   printf("\n");
}

for(int i=0;i<no_of_tracks;i++){
   sec_track[i][1]=abs(head - sec_track[i][0]);
   head=sec_track[i][0];
}

int total_seek_time;
for(int i=0;i<no_of_tracks;i++){
   total_seek_time+=sec_track[i][1];
}

printf("Next track to be traversed  No. of tracks to be traversed\n");
for(int i=0;i<no_of_tracks;i++){
   printf("\t\t%d\t\t",sec_track[i][0]);
   printf("\t\t%d\t\t",sec_track[i][1]);
   printf("\n");
}
```

```
    float avg_s_time = (float)total_seek_time/no_of_tracks;
    printf("Average seek time is %f: ",avg_s_time);

    return 0;
}


SCAN-->
#include<stdio.h>
#include<stdlib.h>

int no_of_tracks;


int main(){
    printf("Enter the number of request tracks:");
    scanf("%d",&no_of_tracks);
    int sec_track[no_of_tracks][2];
    for(int i=0;i<no_of_tracks;i++){
        printf("Enter the %d(th/st/nd/rd) track: ",i+1);
        scanf("%d",&sec_track[i][0]);
    }
    for(int i=0;i<no_of_tracks;i++){
        sec_track[i][1]=0;
    }
    int head;
    printf("Enter the head: ");
    scanf("%d",&head);

    for(int i=0;i<no_of_tracks-1;i++){
        for(int j=0;j<no_of_tracks-i-1;j++){
            if(sec_track[j][0]<sec_track[j+1][0]){
                int temp  = sec_track[j][0];
                sec_track[j][0]=sec_track[j+1][0];
                sec_track[j+1][0]=temp;
            }
        }
    }


    int flag = 0;
    for(int i=0;i<no_of_tracks;i++){
        if(sec_track[i][0]<head){
            flag = i;
            break;
        }
    }

    int l = 0;
    int r = flag-1;
    while(l<r){
        int temp = sec_track[l][0];
        sec_track[l][0]=sec_track[r][0];
        sec_track[r][0]=temp;
        l++;
        r--;
    }
```

```
   printf("Next track to be traversed  No. of tracks to be traversed\n");
   for(int i=0;i<no_of_tracks;i++){
      printf("\t\t%d\t\t",sec_track[i][0]);
      printf("\t\t%d\t\t",sec_track[i][1]);
      printf("\n");
   }

   for(int i=0;i<no_of_tracks;i++){
      sec_track[i][1]=abs(head - sec_track[i][0]);
      head=sec_track[i][0];
   }

   int total_seek_time;
   for(int i=0;i<no_of_tracks;i++){
      total_seek_time+=sec_track[i][1];
   }

   printf("Next track to be traversed  No. of tracks to be traversed\n");
   for(int i=0;i<no_of_tracks;i++){
      printf("\t\t%d\t\t",sec_track[i][0]);
      printf("\t\t%d\t\t",sec_track[i][1]);
      printf("\n");
   }


   printf("Total seek time: %d\n",total_seek_time);
   float avg_s_time = (float)total_seek_time/no_of_tracks;
   printf("Average seek time is %f: ",avg_s_time);

   return 0;
}

SSTF-->
#include<stdio.h>
#include<stdlib.h>

int no_of_tracks;


int main(){
   printf("Enter the number of request tracks: ");
   scanf("%d",&no_of_tracks);
   int sec_track[no_of_tracks][2];
   for(int i=0;i<no_of_tracks;i++){
      printf("Enter the %d(th/st/nd/rd) track: ",i+1);
      scanf("%d",&sec_track[i][0]);
   }
   for(int i=0;i<no_of_tracks;i++){
      sec_track[i][1]=0;
   }

   int head;
   printf("Enter the head: ");
   scanf("%d",&head);

   int temp[no_of_tracks][2];
```

```
    int j=0;
    for(int i=0;i<no_of_tracks;i++){
        temp[i][1]=0;
    }
    int headt = head;
    int flag;
    int count = 0;
    while(count<=no_of_tracks){
        int min = 9999;
        for(int i=0;i<no_of_tracks;i++){
            if(abs(sec_track[i][0]-headt)<min && sec_track[i][0]!=-1){
                min = abs(sec_track[i][0]-headt);
                flag = i;
            }
        }
        count++;
        headt = sec_track[flag][0];
        temp[j][0]=headt;
        sec_track[flag][0]=-1;
        j++;
    }


    printf("Next track to be traversed  No. of tracks to be traversed\n");
    for(int i=0;i<no_of_tracks;i++){
        printf("\t\t%d\t\t",temp[i][0]);
        printf("\t\t%d\t\t",temp[i][1]);
        printf("\n");
    }



    for(int i=0;i<no_of_tracks;i++){
        temp[i][1]=abs(head - temp[i][0]);
        head=temp[i][0];
    }



    int total_seek_time=0;
    for(int i=0;i<no_of_tracks;i++){
        total_seek_time+=temp[i][1];
    }

    printf("Next track to be traversed  No. of tracks to be traversed\n");
    for(int i=0;i<no_of_tracks;i++){
        printf("\t\t%d\t\t",temp[i][0]);
        printf("\t\t%d\t\t",temp[i][1]);
        printf("\n");
    }
    printf("Total seek time: %d\n",total_seek_time);
    float avg_s_time = (float)total_seek_time/(no_of_tracks);
    printf("Average seek time is %f: ",avg_s_time);
    return 0;
}
```

```
#include<stdio.h>
#include<stdlib.h>

#include<limits.h>

int main()
{


  /* //FCFS ALGORITHM------>>>>>
   int n,h;
   int arr[n];
   int arr1[n];
   int count=0;
   printf("enter the number of tracks :");
   scanf("%d",&n);
   printf("enter the head :");
   scanf("%d",&h);

   printf("enter the entries one by one :");

   for(int i=0;i<n;i++){
         scanf("%d",&arr[i]);
   }
   int m=h;
   for(int i=0;i<n;i++){

      m= abs(m-arr[i]);
      count+=m;
      printf(" %d ",m);
      m=arr[i];


   }

   printf("\n average seek time is : %d ",count/n);
*/
```

```
//SSTE ALGORITHM---->>>>>
/*int n,h;

int x;
int count=0;
printf("enter the number of tracks :");
scanf("%d",&n);
int arr[n];
int visited[n];
printf("enter the head :");
scanf("%d",&h);

printf("enter the entries one by one :");

for(int i=0;i<n;i++){
   scanf("%d",&arr[i]);
}


for(int i=0; i<n; i++)
{  int min =9999;


   for(int j=0; j<n; j++)
   {
      if(abs(h-arr[j])<min)
      {
         min=abs(h-arr[j]);

         x=j;
      }
   }


   printf("%d ",abs(h-arr[x]));
   count+=abs(h-arr[x]);
   h=arr[x];
   arr[x]=100000;

}
printf("\n average seek time is : %d ",count/n);*/

//SCAN ALGORITHM------>>>>>>>
/* int n,h;

int x;
int count=0;
printf("enter the number of tracks :");
scanf("%d",&n);
int arr[n];
int visited[n];
printf("enter the head :");
scanf("%d",&h);

printf("enter the entries one by one :");

for(int i=0;i<n;i++){
```

```
    scanf("%d",&arr[i]);
  }

void selectionSort(int *A, int n){
  int indexOfMin, temp;

  for (int i = 0; i < n-1; i++)
  {
    indexOfMin = i;
    for (int j = i+1; j < n; j++)
    {
      if(A[j] < A[indexOfMin]){
        indexOfMin = j;
      }
    }
    // Swap A[i] and A[indexOfMin]
    temp  = A[i];
    A[i] = A[indexOfMin];
    A[indexOfMin] = temp;
  }
}

  selectionSort(arr,n);
  for(int i=0;i<n;i++){
    if(arr[i]>h){
      x=i;
      break;
      }
    }


    for(int i=x; i<n; i++)
    {
      printf("%d ",abs(arr[i]-h));

      count+=abs(arr[i]-h);
      h=arr[i];
    }



   for(int i=(x-1);i>=0;i--){
     printf("%d ",abs(arr[i]-h));
     count+=abs(arr[i]-h);
     h=arr[i];
   }


   printf("\n average seek time is : %d ",count/n);
*/
//CSCAN ALGORITHM----->>>>>

int n,h;

  int x;
  int count=0;
  printf("enter the number of tracks :");
```

```
   scanf("%d",&n);
   int arr[n];
   int visited[n];
   printf("enter the head :");
   scanf("%d",&h);

   printf("enter the entries one by one :");

   for(int i=0;i<n;i++){
      scanf("%d",&arr[i]);
   }

void selectionSort(int *A, int n){
   int indexOfMin, temp;

   for (int i = 0; i < n-1; i++)
   {
      indexOfMin = i;
      for (int j = i+1; j < n; j++)
      {
         if(A[j] < A[indexOfMin]){
            indexOfMin = j;
         }
      }
      // Swap A[i] and A[indexOfMin]
      temp  = A[i];
      A[i] = A[indexOfMin];
      A[indexOfMin] = temp;
   }
}

   selectionSort(arr,n);
   for(int i=0;i<n;i++){
      if(arr[i]>h){
         x=i;
         break;
         }
      }


      for(int i=x; i<n; i++)
      {
         printf("%d ",abs(arr[i]-h));

         count+=abs(arr[i]-h);
         h=arr[i];
      }

    for(int i=0;i<x;i++){
      printf("%d ",abs(arr[i]-h));
      count+=abs(arr[i]-h);
      h=arr[i];
    }
printf("\n average seek time is : %d ",count/n);
```

```
    return 0;
}
```