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;

}