**Exam:** OS Lab Exam

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**Answer 1**

*Source Code:*

#include <iostream>

#include <vector>

#include <cmath>

/\*

sstf

1. find closest point to current pos

3. table to show disk movement

2. total seek time

\*/

using namespace std;

int algo(vector<int> programs, int pos){

int total\_movement=0, diff,next;

cout<<"Disk Movement:-"<<endl;

cout<<"From\tto\tDisk Movement"<<endl;

while(!programs.empty()){

next=0;

for (int i=0; i!=(int)programs.size(); i++){

if(abs(programs[i]-pos)<abs(programs[next]-pos)){

next=i;

}

}

diff=abs(programs[next]-pos);

total\_movement+=diff;

cout<<pos<<"\t"<<programs[next]<<"\t"<<diff<<endl;

pos=programs[next];

programs.erase(programs.begin()+next);

}

return total\_movement;

}

int main()

{

int n,pos,time;

cout << "Enter number of programs and Initial position of Head"<<endl;

cin>>n>>pos;

cout<<"Enter seek time per cilynder"<<endl;

cin>>time;

vector<int> programs(n);

cout<<"Enter programs"<<endl;

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

cin>>programs[i];

}

int total\_movements=algo(programs,pos);

total\_movements=(float)total\_movements;

cout<<"Total seek Time: "<<total\_movements\*time<<endl;

return 0;

}

*Output:*

Text

Description automatically generated