#include <stdio.h>

#include <stdlib.h>

#include <math.h>

typedef struct Process {

int id;

int arrivalTime;

int burstTime;

} Process;

typedef struct DiskRequest {

int trackNumber;

int served;

} DiskRequest;

void fcfs(DiskRequest requests[], int numRequests, int initialPosition) {

int currentHeadPosition = initialPosition;

int totalMovement = 0;

printf("FCFS Disk Scheduling:\n");

printf("Sequence: %d ", currentHeadPosition);

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

totalMovement += abs(currentHeadPosition - requests[i].trackNumber);

currentHeadPosition = requests[i].trackNumber;

printf("-> %d ", currentHeadPosition);

}

printf("\nTotal Head Movement: %d\n", totalMovement);

}

int main() {

DiskRequest requests[] = {{452, 0}, {789, 0}, {235, 0}, {4123, 0}, {1250, 0}, {45, 0}, {85, 0}, {678, 0}, {1509, 0}, {1470, 0}, {45, 0}};

int numRequests = sizeof(requests) / sizeof(requests[0]);

int initialPosition = 98;

fcfs(requests, numRequests, initialPosition);

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

requests[i].served = 0;

}

return 0;

}