14.Average head movement

#include <stdio.h>

#include <stdlib.h>

#define MAX\_QUEUE\_SIZE 100

int requestQueue[MAX\_QUEUE\_SIZE];

int queueLength = 0;

void addRequest(int track)

{

requestQueue[queueLength] = track;

queueLength++;

}

int getHeadMovement(int initialHeadPosition)

{

int i, headMovement = 0;

for (i = 0; i < queueLength; i++) {

headMovement += abs(requestQueue[i] - initialHeadPosition);

initialHeadPosition = requestQueue[i];

}

return headMovement;

}

int main()

{

int numTracks, initialHeadPosition, i, track;

printf("Enter the number of tracks: ");

scanf("%d", &numTracks);

printf("Enter the initial head position: ");

scanf("%d", &initialHeadPosition);

printf("Enter the track positions: ");

for (i = 0; i < numTracks; i++) {

scanf("%d", &track);

addRequest(track);

}

int headMovement = getHeadMovement(initialHeadPosition);

printf("Average head movement: %f\n", (float)headMovement/queueLength);

return 0;

}

OUTPUT

