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Course — BSc IT
Section — A
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Q2.

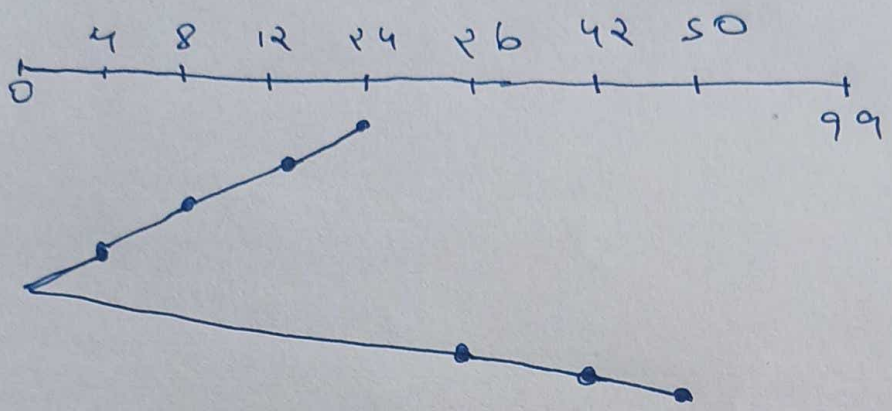
Source Code

```
#include<stdio.h>
#include<stdlib.h>
 int main()
{
   int RQ[100], i,j, n, TotalHeadMoment=0, initial, size;
   printf("Enter the number of Requests\n");
   scanf("%d", &n);
   printf("Enter the Requests sequence\n");
    for(i=0; i<n; i++)
   {
     scanf("%d", &RQ[i]);
   }
     printf("Enter initial head position\n");
     scanf("%d", &initial);
     printf("Enter total disk size\n");
     scanf("%d", &size);
    for(i=0; i<n; i++)
    {
        for(j=0; i<n-1;; j++)
       {
         if(RQ[j]>RQ[j+1])
         {
             int temp;
             temp = RQ[j];
             RQ[j] = RQ[j+1];
```

```
            RQ[j+1] = temp;
        }
    }
}

int index;
for(i=0; i<n; i++)
{
    if (initial < RQ[i])
    {
        index=i;
        break;
    }
}
for (i=index-1; i>=0; i--)
{
    TotalHeadMoment = TotalHeadMoment + abs(RQ[i] -
    initial);
    initial = RQ[i];
}
TotalHeadMoment += abs(RQ[i+1]-0);
initial = 0;
for (i=index; i<n; i++)
{
    TotalHeadMoment += abs (RQ[i]-initial);
    initial = RQ[i];
}
printf("Total arm Move is %d", TotalHeadMoment);
return 0;
}
```

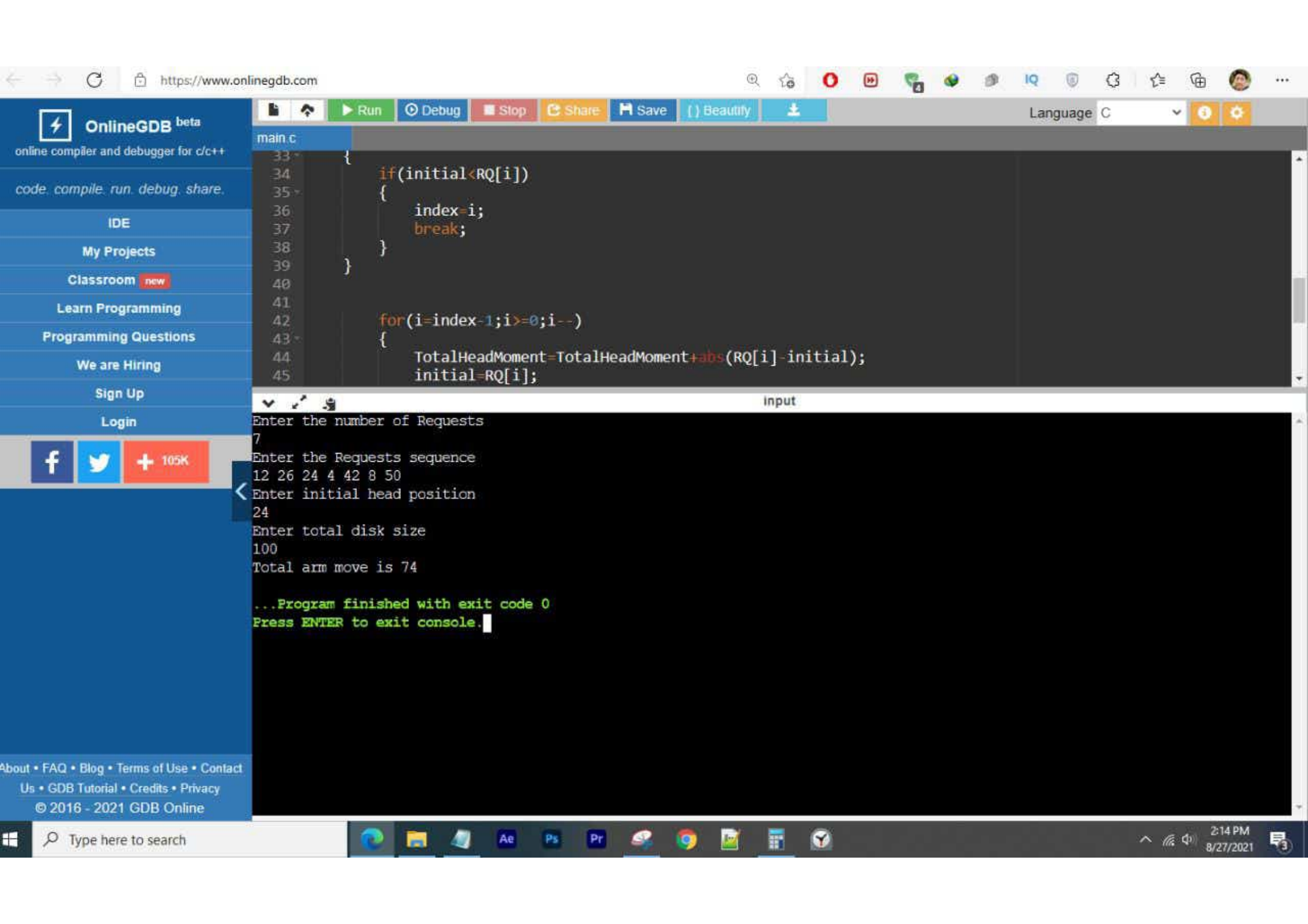
Calculation



$\Rightarrow (24-12)+(12-8)+(8-4)+(4-0)+(26-0)+(42-26)+(50-42)$

$\Rightarrow 12+4+4+4+26+16+8$

$\Rightarrow 74$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Run
Debug
Stop
Share
Save
{ } Beautify
Language C
main.c
{
if(initial<RQ[i])
{
index=i;
break;
}
}
for(i=index-1;i>=0;i--)
{
TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
initial=RQ[i];
input
Enter the number of Requests
7
Enter the Requests sequence
12 26 24 4 42 8 50
Enter initial head position
24
Enter total disk size
100
Total arm move is 74
...Program finished with exit code 0
Press ENTER to exit console.
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