GRAPHIC ERA HILL UNIVERSITY
CAMPUS - DEHRADUN

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Subject code :- PBI-202

Subject - Operating System Practical
Course :- BSc IT
Sem :- 2
Sec :- A

Question : 2.

```
#include <stdio.h>
int absolute value (int);
void main ( )
{
  int
  queue [25], n, headposition, i, j, k, seek = 0,
  max range;
  difference, temp, queue 1[20], queue 2[20], t emp=0, temp2=0;
  float average seek time;
  printf ("Enter the maximum range of Disk");
  Scanf ("%.d", &maxrange);
  printf ("Enter the number of queue requests.");
  Scanf ("%.d", &n);
  printf ("Enter the number of queue initial head position.")
   Scanf ("%.d", & head positions);
  printf ("Enter the disk positions to be read (queue):");
   for (i=1; i<= n; i++)
  {
    scanf ("%.d", & temp);
    if (temp > headposition)
```

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```
{
 queue2[temp2] = temp;
  temp2++;
 }
}
for (i=0; i<temp1-1; i++)
{
 for (j=i+1; j<temp1; j++)
 {
  if (queue1[i] > queue1[j])
  {
   temp = queue1[i];
   queue1[i] = queue1[j];
   queue1[j] = temp;
  }
 }
}
for (i=0; i<temp2-1; i++)
{
 for (j=i+1; j<temp2; j++)
{
 if (queue2[i] < queue2[j])
  {
   temp = queue2[i];
   queue2[i] = queue2[j];
   queue2[j] = temp;
  }
}}
for (i=1, j=0, j<temp1; i++ j++)
{
  queue[i] = queue1[j];
}
```

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```
queue [i] = max range;
for (i = temp1+2, j = 0; j < temp2; i++, j++)
{
  queue [i] = queue2 [j];
}
  queue [i] = 0;
  queue [0] = headposition;
  for (j = 0; j <= n; j++)
  {
difference =
 absolute value (queue [j+1] - queue [j]);
  seek = seek + difference;
  printf ("Disk head moves from position %d to %d
with seek %d \n",
    queue [j], queue [j+1], difference);

 }
average seek time = seek / (float) n;
printf ("Total seek time = %d \n", seek);
printf (" Average seek time = %f \n",
   average seek time);
 }
 int absolute value (int x)
{
  if (x > 0)
  {
    return x;
  }
    else
    return x * -1;
 }
```


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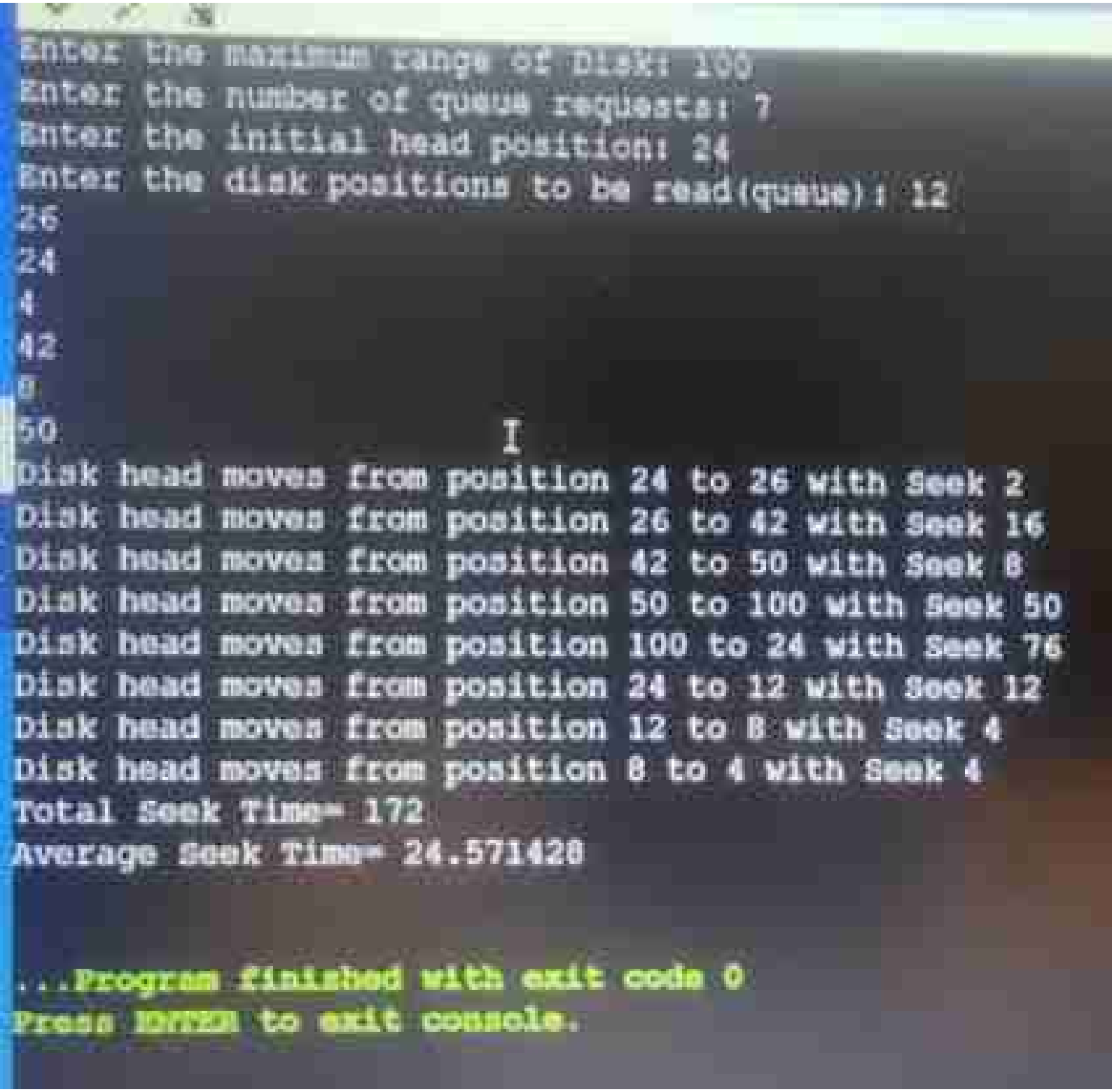
Enter the maximum range of Disk: 100
Enter the number of queue requests: 7
Enter the initial head position: 24
Enter the disk positions to be read(queue): 12
26
24
4
42
8
50
Disk head moves from position 24 to 26 with Seek 2
Disk head moves from position 26 to 42 with Seek 16
Disk head moves from position 42 to 50 with Seek 8
Disk head moves from position 50 to 100 with Seek 50
Disk head moves from position 100 to 24 with Seek 76
Disk head moves from position 24 to 12 with Seek 12
Disk head moves from position 12 to 8 with Seek 4
Disk head moves from position 8 to 4 with Seek 4
Total Seek Time= 172
Average Seek Time= 24.571428
...Program finished with exit code 0
Press ENTER to exit console.