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Subject - Operating System

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Code - PB1202
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Q2.

```
#include<stdio.h>
int absolute value(int);
Void main()
{
 int queue[25], n, headposition, i, j, k, seek=0, maxrange,
 difference, temp, queue1[20], queue2[20], temp1=0, temp2=0;
 printf("Enter the maximum range of Disk: ");
 scanf("%d", &maxrange);
 printf("Enter the number of queue requests: ");
 scanf("%d", &n);
 printf("Enter the initial head position: ");
 scanf("%d", &headposition);
 printf("Enter the disk positions to be read(queue): ");
 for(i=1; i<n; i++)
{
 scanf("%d", &temp);
 if(temp > headposition)
 {
  queue1[temp1] = temp;
  temp1++;
 }
 else
 {
  queue2[temp2] = temp
  temp2++;
 }
}
```

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```
for (i=0; i<temp1-1 ;i++)
{
  for(j = i+1; j<temp1 ;j++)
  {
    if(queue1[i]> queue 1[j])
    {
      temp = queue1[i];
      queue 1[i] = queue1[j];
      queue 1[j] = temp;
    }
  }
}
for (i=0 ; i<temp2-1;i++)
{
  for(j = i+1; j<temp2;j++)
  {
    if(queue 2[i] < queue 2[j])
    {
      temp = queue 2[i];
      queue 2[i] = queue 2[j];
      queue 2[j] = temp;
    }
  }
}
. for(i=1; j=0; j<temp1; i++, j++)
{ queue[i] = queue 1[j];
}
  queue[i] = matrange;
```

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```
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 = absoluteValue(queue[j+1]-queue[j]);
    seek = seek + difference;
 }
  printf("Total head movement=%d\n", seek);
 }
  int absoluteValue(int x)
 {
   if(x>0)
  {
    return x;
  }
   else
  {
   return x*-1;
  }
 }}
```

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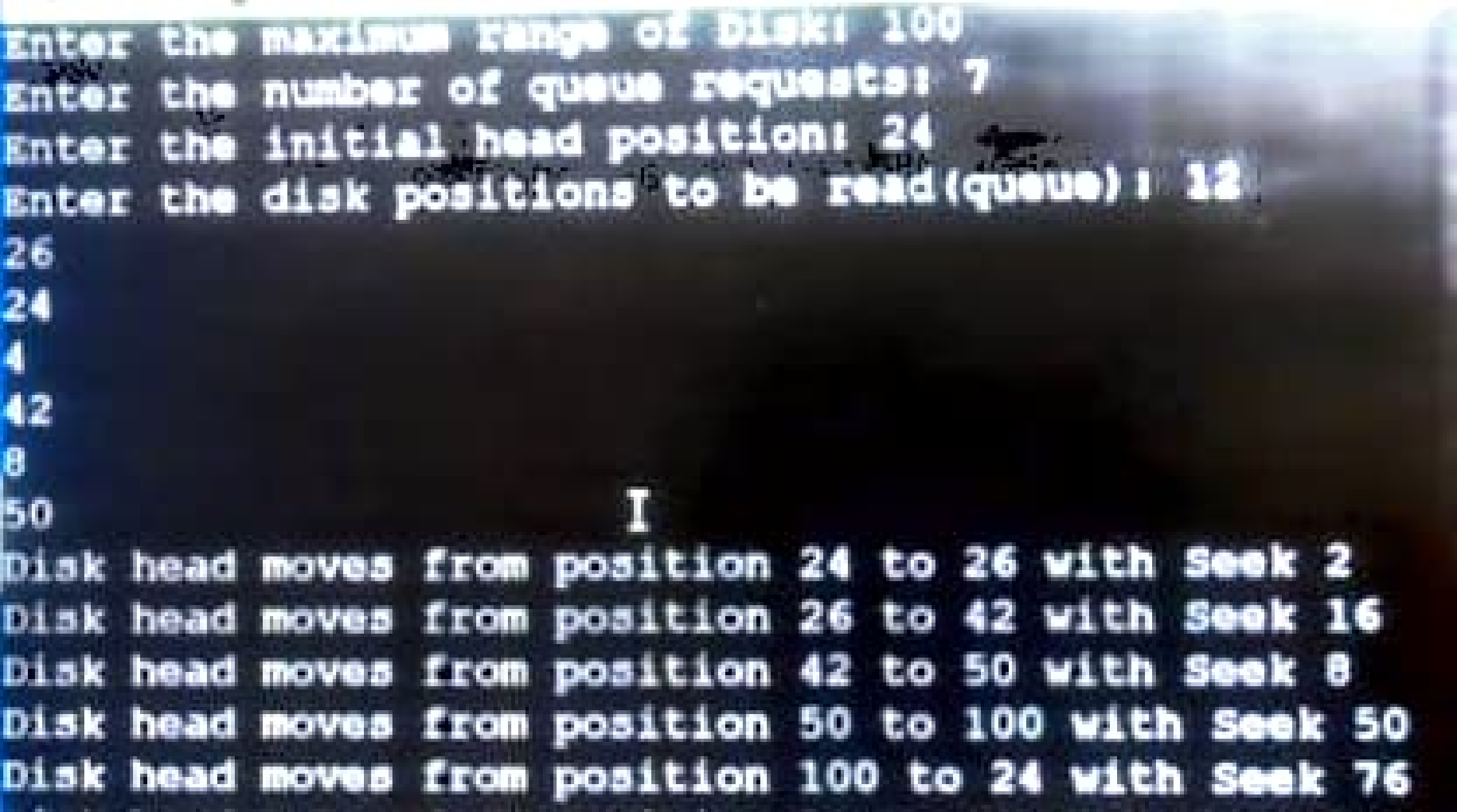
Enter the maximum range of Disk: 100
Enter the number of queue requests: 7
Enter the initial head position: 24
Enter the disk positions to be read(queue): 12
26
24
4
42
8
50
Disk head moves from position 24 to 26 with Seek 2
Disk head moves from position 26 to 42 with Seek 16
Disk head moves from position 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