

```

#include <stdio.h>
int absolute value(int);
void main()
{
    int queue[25], n, head position, i, j, k, seek20, maxrange,
    difference, temp, queue1[20], queue2[20], temp1=0, temp2=0;
    printf("Entre the maximum range of disk:");
    scanf("%d", &maxrange);
    printf("Entre 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++;
        }
    }
}

```

```
for (i = 0; i < temp 1 - 1; i++)
```

```
{
```

```
for (j = i + 1; j < temp 1; j++)
```

```
{
```

```
if (queue 1 [i] > queue 1 [j])
```

```
{
```

```
temp = queue 1 [i]
```

```
queue 1 [i] = queue 1 [j];
```

```
queue 1 [j] = temp;
```

```
}
```

```
}
```

```
}
```

```
for (i = 0; i < temp 2 - 1; i++)
```

```
{
```

```
for (j = i + 1; j < temp 2; 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 < temp; i++ j++)
```

```
{
```

```
queue [i] = queue 1 [j];
```

```
}
```

```
queue [i] = maxrange
```

```

for (i = temp1 + 2, j = 0, j < temp2; i++, j++)
{
    queue[i] = queue[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 movements = %d \n", seek);
}

int absolutevalue (int x)
{
    if (x > 0)
    {
        return x;
    }
    else
    {
        return x * -1;
    }
}

```

```
disk.C = 0; OS2_scan_disk / , 17 (37) { : (OS2_scan_disk /
```

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 head movement is 170

PS C:\Users\hp\c programming\operating system> █