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Cource - BSc, IT   ID - 20041052   Exam - OS
                        Roll no- 2023029

```c
# include stdio.h
int absolute value(int);
void main()
{
    int queue[25], n, hea dposition ,i,j,k ,seek=0, maxrange,
    diffrence , temp, queue1[20] ,queue 2[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 queue1 [i] > queue1 [j])
     {
        temp= queue1 [i]
        queue1[i] = queue1[j];
        queue 1[j]= temp;
     }
  }
}
  for (i=0 ; i< temp2 -1 ; i++)
  {
     for(j = i+1 ; j< temp 2; j++ )
     {
        if (queue2[i] < queue2[j])
        {
           temp = queue2[i]
           queue 2[i] = queue 2[j];
           queue 2 [j]= temp
        }
     }
  }
        for i=1 ,j=0; j< temp ; i++ j++ )
        {
        queue [i] = queue1[j];

        }
        queue [i] = maxrange
```

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

  }
      int absolute value (int x)
    {
      if (x >0)
      {
        return x ;
      }
      else
      {
        return x*=1;
      }
    }
```

```
isk.c -o usz_scan_uisk ; , if (0:) ; .\usz_scan_uisk ;
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>
```