

### **EXP 39**

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int RQ[100],i,j,n,TotalHeadMoment=0,initial,size,move;
    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);
    printf("Enter the head movement direction for high 1 and for low 0\n");
    scanf("%d",&move);

    for(i=0;i<n;i++)
    {
        for( j=0;j<n-i-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;
        }
    }

    if(move==1)
    {
        for(i=index;i<n;i++)
        {
```

```

        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];
    }
    TotalHeadMoment=TotalHeadMoment+abs(size-RQ[i-1]-1);
    TotalHeadMoment=TotalHeadMoment+abs(size-1-0);
    initial=0;
    for( i=0;i<index;i++)
    {
        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];

    }
}
else
{
    for(i=index-1;i>=0;i--)
    {
        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];
    }
    TotalHeadMoment=TotalHeadMoment+abs(RQ[i+1]-0);
    TotalHeadMoment=TotalHeadMoment+abs(size-1-0);
    initial =size-1;
    for(i=n-1;i>=index;i--)
    {
        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];

    }
}

printf("Total head movement is %d",TotalHeadMoment);
return 0;
}

```

```
Enter the number of Requests
3
Enter the Requests sequence
2
3
2
Enter initial head position
2
Enter total disk size
3
Enter the head movement direction for high 1 and for low 0
1
Total head movement is 6
-----
Process exited after 7.383 seconds with return value 0
Press any key to continue . . . |
```