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#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);

    // logic for C-Scan disk scheduling

    /*logic for sort the request array */
    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;
        }
    }
}

```

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// if movement is towards high value
if(move==1)
{
    for(i=index;i<n;i++)
    {
        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];
    }
    // last movement for max size
    TotalHeadMoment=TotalHeadMoment+abs(size-RQ[i-1]-1);
    /*movement max to min disk */
    TotalHeadMoment=TotalHeadMoment+abs(size-1-0);
    initial=0;
    for( i=0;i<index;i++)
    {
        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];
    }
}
// if movement is towards low value
else
{
    for(i=index-1;i>=0;i--)
    {
        TotalHeadMoment=TotalHeadMoment+abs(RQ[i]-initial);
        initial=RQ[i];
    }
    // last movement for min size
    TotalHeadMoment=TotalHeadMoment+abs(RQ[i+1]-0);
    /*movement min to max disk */
    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;
}

```

**Output:-**

Enter the number of Request

8

Enter the Requests Sequence

95 180 34 119 11 123 62 64

Enter initial head position

50

Enter total disk size

200

Enter the head movement direction for high 1 and for low 0

1

Total head movement is 382