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#include<stdio.h>
#include<stdlib.h>

void sort(int a[],int n)
{
    int i,j,t;
    for(i=1;i<n;i++)
        for(j=0;j<n-i;j++)
            if(a[j]>a[j+1])
            {
                t = a[j];
                a[j] = a[j+1];
                a[j+1] = t;
            }
}

int search(int a[],int n,int head)
{
    int i;
    for(i=0;i<n;i++)
    {
        if(head < a[i])
            return i;
    }
    return -1;
}
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int SCAN(int request[], int n, int head, int direction,int size)
{
    int seek_count = 0;
    int distance, cur_track;
    int seek_sequence[200],index,i,j=0;

    sort(request,n);
    index = search(request,n,head);

    // if movement is towards right/high value
    if(direction==1)
    {
        for(i=index; i<n; i++)
        {
            seek_count=seek_count+abs(request[i]-head);
            seek_sequence[j++] = request[i];
            head=request[i];
        }
        // last movement for max size
        seek_count=seek_count+abs(request[i-1]-(size-1));
        head = size-1;
        for(i=index-1; i>=0; i--)
        {
            seek_count=seek_count+abs(request[i]-head);
            seek_sequence[j++] = request[i];
            head=request[i];
        }
    }
    else
    { // if movement is towards left/low value
        for(i=index-1; i>=0; i--)
        {
            seek_count=seek_count+abs(request[i]-head);
            seek_sequence[j++] = request[i];
            head=request[i];
        }
        // last movement for min size
        seek_count=seek_count+abs(request[i+1]-0);
        head = 0;
        for(i=index; i<n; i++)
        {
            seek_count=seek_count+abs(request[i]-head);
            seek_sequence[j++] = request[i];
            head=request[i];
        }
    }
}

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        printf("Seek Sequence is ");
        for (i = 0; i < j; i++)
            printf("%d\n", seek_sequence[i]);

    return seek_count;
}

// Driver code
int main()
{
    int request[100];
    int head;

    int i, n, seek_cnt, direction, size;

    printf("\nEnter number of request: ");
    scanf("%d", &n);

    printf("Enter total disk size\n");
    scanf("%d", &size);

    printf("\nEnter disk request string: ");
    for(i=0; i<n; i++)
        scanf("%d", &request[i]);

    printf("\nEnter current head position: ");
    scanf("%d", &head);

    printf("\nEnter sequence: (0:left, 1:right)");
    scanf("%d", &direction);

    seek_cnt = SCAN(request, n, head, direction, size);

    printf("\nTotal Number of head movement : %d", seek_cnt);

    return 0;
}

```