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#include <stdio.h>

#include <stdlib.h>

int main()
{
    int RQ[100], i, n, TotalHeadMoment = 0, initial, count = 0;

    printf("Enter the number of Requests: ");
    scanf("%d", &n);
    printf("Enter the Requests sequence:\n");
    for (i = 0; i < n; i++)
        scanf("%d", &RQ[i]);
    printf("Enter initial head position: ");
    scanf("%d", &initial);
    printf("%d -> ", initial);
    while (count != n)
    {
        int min = 1000, d, index = -1;
        for (i = 0; i < n; i++)
        {
            d = abs(RQ[i] - initial);
            if (d < min) {
                min = d;
                index = i;}
        }
        TotalHeadMoment += min;
        initial = RQ[index];
        printf("%d -> ", RQ[index]);
        RQ[index] = 1000;
        count++;
    }
    printf("\nTotal head movement is %d\n", TotalHeadMoment);
    return 0;
}

```