

```
1 #include <stdio.h>
2 #include<stdlib.h>
3
4 void fcfs(int arr[], int n) {
5     int total_head_movement = 0, current_position = 0;
6     for (int i = 0; i < n; i++) {
7         total_head_movement += abs(arr[i] - current_position);
8         current_position = arr[i];
9     }
10    printf("Total head movement: %d\n", total_head_movement);
11 }
12
13 int main() {
14     int requests[] = {100, 180, 50, 30, 200};
15     int n = sizeof(requests) / sizeof(requests[0]);
16     fcfs(requests, n);
17     return 0;
18 }
```

Total head movement: 500

=== Code Execution Successful ===

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 void SCAN(int arr[], int size, int head, int direction) {
4     int seek_sequence[100], index = 0, i;
5     int total_seeks = 0;
6     for (i = 0; i < size; i++) {
7         for (int j = i + 1; j < size; j++) {
8             if (arr[i] > arr[j]) {
9                 int temp = arr[i];
10                arr[i] = arr[j];
11                arr[j] = temp;
12            }
13        }
14        if (direction == 1) { // Moving towards higher values
15            for (i = 0; i < size; i++) {
16                if (arr[i] >= head) {
17                    seek_sequence[index++] = arr[i];
18                    total_seeks += abs(head - arr[i]);
19                    head = arr[i];
20                }
21            }
22            total_seeks += abs(head - arr[size - 1]); // Move to end
23            head = arr[size - 1];
24            for (i = size - 1; i >= 0; i--) {
25                if (arr[i] < head) {
26                    seek_sequence[index++] = arr[i];
27                    total_seeks += abs(head - arr[i]);
28                    head = arr[i];
29                }
30            }
31        } else { // Moving towards lower values
32            for (i = size - 1; i >= 0; i--) {
33                if (arr[i] <= head) {
34                    seek_sequence[index++] = arr[i];
35                    total_seeks += abs(head - arr[i]);
36                    head = arr[i];
37                }
38            }
39            total_seeks += abs(head - arr[0]); // Move to start
40            head = arr[0];
41            for (i = 0; i < size; i++) {
42                if (arr[i] > head) {
43                    seek_sequence[index++] = arr[i];
44                    total_seeks += abs(head - arr[i]);
45                    head = arr[i];
46                }
47            }
48        }
49        printf("Seek Sequence: ");
50        for (i = 0; i < index; i++) {
51            printf("%d ", seek_sequence[i]);
52        }
53        printf("\nTotal Seek Time: %d\n", total_seeks);
54    }
55}
56
57 int main() {
58     int requests[] = {176, 79, 34, 60, 92, 11, 41, 114};
59     int size = sizeof(requests) / sizeof(requests[0]);
60     int head = 50; // Initial head position
61     int direction = 1; // 1 for right, 0 for left
62     SCAN(requests, size, head, direction);
63     return 0;
64 }

```

```

- Seek Sequence: 60 79 92 114 176 114 92 79 60 41 34 11
Total Seek Time: 291

```

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=== Code Execution Successful ===

```