

Code:

```
// Write a program to implement the LOOK Disk Scheduling Policy
```

```
#include <bits/stdc++.h>
using namespace std;
```

```
// direction towards large value
```

```
int findShortest(int head, int *queue, int n) {
    int index;
    for (int i = 0; i < n; i++)
        if (queue[i] < head)
            index = i;
    return index;
}
```

```
int main() {
    int head, n, range, total = 0;
```

```
    cout << "Enter the head position: ";
    cin >> head;
    cout << "\nEnter the number of requests: ";
    cin >> n;
    cout << "\nEnter the range of cylinder: ";
    cin >> range;
```

```
    int queue[n];
    cout << "\nEnter the cylinder numbers for the requests: ";
    for (int i = 0; i < n; i++)
        cin >> queue[i];
    sort(queue, queue + n);
```

```
    cout << "\nThe order of execution: " << endl;
    int index = findShortest(head, queue, n);
    total += abs(head - queue[index + 1]);
    cout << head << "-->" << queue[index + 1] << endl;
    for (int i = index + 1; i < n - 1; i++) {
        total += abs(queue[i + 1] - queue[i]);
        cout << queue[i] << "-->" << queue[i + 1] << endl;
    }
    total += abs(queue[n - 1] - queue[index]);
    cout << queue[n - 1] << "-->" << queue[index] << endl;
    for (int i = index; i > 0; i--) {
        total += abs(queue[i] - queue[i - 1]);
        cout << queue[i] << "-->" << queue[i - 1] << endl;
    }
    cout << "\nTotal Headmovements: " << total;
```

```
    return 0;  
}
```

Output:

Enter the head position: 143

Enter the number of requests: 9

Enter the range of cylinder: 5000

Enter the cylinder numbers for the requests: 86 1470 913 1774 948 1509 1022 1750 130

The order of execution:

143-->913

913-->948

948-->1022

1022-->1470

1470-->1509

1509-->1750

1750-->1774

1774-->130

130-->86

Total Headmovements: 3319