Code:

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

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

void SCAN(int queue[], int n, int head, int range) {

  queue[n] = head;
  sort(queue, queue + n + 1);
  int index = 0;

  for (int i = 0; i < n; i++) {
    if (queue[i] == head) {
      index = i;
      break;
    }
  }

  cout << "\nSCAN POLICY\n";
  cout << "\n-----------------\n";
  cout << "\tLEFT TO RIGHT";
  cout << "\n-----------------\n";

  for (int i = index; i <= n; i++) {
    cout << "TRACK: " << queue[i] << endl;
  }
  cout << "TRACK: " << range << endl;
  for (int i = index - 1; i >= 0; i--) {
    cout << "TRACK: " << queue[i] << endl;
  }
  cout << "\nTotal Head Movements: " << (range - head + range - queue[0])
       << endl;

  cout << "\n-----------------\n";
  cout << "\tRIGHT TO LEFT";
  cout << "\n-----------------\n";

  for (int i = index; i >= 0; i--) {
    cout << "TRACK: " << queue[i] << endl;
  }
  cout << "TRACK: " << 0 << endl;
  for (int i = index + 1; i <= n; i++) {
    cout << "TRACK: " << queue[i] << endl;
  }
  cout << "\nTotal Head Movements: " << head + queue[n] << endl;
}
```

```
int main() {

  int head, n, range;

  cout << "\nEnter 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 track: ";
  for (int i = 0; i < n; i++) {
    cin >> queue[i];
  }

  SCAN(queue, n, head, range - 1);
}
```

Output:

```
Enter head position: 51

Enter the number of requests: 8

Enter the range of cylinder: 200

Enter the track: 96 185 35 122 16 120 55 57

SCAN POLICY

-----------------
          LEFT TO RIGHT
-----------------
TRACK: 51
TRACK: 55
TRACK: 57
TRACK: 96
TRACK: 120
TRACK: 122
TRACK: 185
TRACK: 199
```

TRACK: 35
TRACK: 16

Total Head Movements: 331

RIGHT TO LEFT

TRACK: 51
TRACK: 35
TRACK: 16
TRACK: 0
TRACK: 55
TRACK: 57
TRACK: 96
TRACK: 120
TRACK: 122
TRACK: 185

Total Head Movements: 236