Let's calculate the total head movements for each algorithm:

### **First Come First Serve (FCFS)**

FCFS services requests in the order they arrive.

Current position: 53

Total head movements: ∣98−53∣+∣183−98∣+∣37−183∣+∣122−37∣+∣14−122∣+∣124−14∣+∣65−124∣+∣67−65∣∣98−53∣+∣183−98∣+∣37−183∣+∣122−37∣+∣14−122∣+∣124−14∣+∣65−124∣+∣67−65∣

=45+85+146+85+108+110+59+2=45+85+146+85+108+110+59+2

=640=640

### **Shortest Seek Time First (SSTF)**

SSTF services the request with the shortest seek time from the current position.

Current position: 53

Total head movements: ∣65−53∣+∣67−65∣+∣37−67∣+∣14−37∣+∣98−14∣+∣122−98∣+∣124−122∣+∣183−124∣∣65−53∣+∣67−65∣+∣37−67∣+∣14−37∣+∣98−14∣+∣122−98∣+∣124−122∣+∣183−124∣

=12+2+30+23+84+24+2+59=12+2+30+23+84+24+2+59

=236=236

### **SCAN**

SCAN services requests in one direction (up or down) until there are no more requests in that direction, then reverses direction.

Current position: 53

Considering we move towards the larger numbers (up):

∣65−53∣+∣67−65∣+∣98−67∣+∣122−98∣+∣124−122∣+∣183−124∣+∣199−183∣∣65−53∣+∣67−65∣+∣98−67∣+∣122−98∣+∣124−122∣+∣183−124∣+∣199−183∣

=12+2+31+24+2+59+16=12+2+31+24+2+59+16

=146=146

### **C-SCAN**

C-SCAN is similar to SCAN but it moves only in one direction, servicing all requests in that direction and then jumps to the other end of the disk.

Current position: 53

Total head movements: ∣65−53∣+∣67−65∣+∣98−67∣+∣122−98∣+∣124−122∣+∣183−124∣+∣199−183∣+∣199−0∣∣65−53∣+∣67−65∣+∣98−67∣+∣122−98∣+∣124−122∣+∣183−124∣+∣199−183∣+∣199−0∣

=12+2+31+24+2+59+16+199=12+2+31+24+2+59+16+199

=345=345

So, the total head movements for each algorithm are:

* FCFS: 640
* SSTF: 236
* SCAN: 146
* C-SCAN: 345