

```

1  package scheduling;
2
3  import java.util.*;
4
5  class Process {
6      int pid;    // Process ID
7      int burst;  // Burst Time
8      int waiting; // Waiting Time
9      int tat;    // Turnaround Time
10
11     Process(int pid, int burst) {
12         this.pid = pid;
13         this.burst = burst;
14     }
15 }
16
17 public class SJF_ALGO {
18     public static void main(String[] args) {
19         Scanner sc = new Scanner(System.in);
20
21         // Input number of processes
22         System.out.print("Enter number of processes: ");
23         int n = sc.nextInt();
24
25         Process[] proc = new Process[n];
26
27         // Input burst times
28         for (int i = 0; i < n; i++) {
29             System.out.print("Enter Burst time for Process[" + (i + 1) + "]: ");
30             int burst = sc.nextInt();
31             proc[i] = new Process(i + 1, burst);
32         }
33
34         // Sort by burst time (ascending → shortest job first)
35         Arrays.sort(proc, Comparator.comparingInt(p -> p.burst));
36
37         // Calculate Waiting Time & Turnaround Time
38         int totalWT = 0, totalTAT = 0;
39         proc[0].waiting = 0;
40         proc[0].tat = proc[0].burst;
41
42         for (int i = 1; i < n; i++) {

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43     proc[i].waiting = proc[i - 1].waiting + proc[i - 1].burst;
44     proc[i].tat = proc[i].waiting + proc[i].burst;
45 }
46
47 // Print Result Table
48 System.out.println("\nProcess\tBurst Time\tWaiting Time\tTurnaround Time");
49
50 for (Process p : proc) {
51     System.out.println("P" + p.pid + "\t" + p.burst + "\t\t" + p.waiting + "\t\t" + p.tat);
52
53     totalWT += p.waiting;
54     totalTAT += p.tat;
55 }
56
57 // Print Averages
58 double avgWT = (double) totalWT / n;
59 double avgTAT = (double) totalTAT / n;
60 System.out.println("\nAverage Waiting Time: " + avgWT);
61 System.out.println("Average Turnaround Time: " + avgTAT);
62
63 sc.close();
64 }
65 }

```

Output:

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<terminated> SJF_Algo [Java Application] /snap/eclipse/124/usr/lib/eclipse/plugins/org...
Enter number of processes: 3
Enter Burst time for Process[1]: 4
Enter Burst time for Process[2]: 6
Enter Burst time for Process[3]: 1

Process Burst Time      Waiting Time      Turnaround Time
P3          1              0              1
P1          4              1              5
P2          6              5              11

Average Waiting Time: 2.00
Average Turnaround Time: 5.67

```