**Level1**

**Driver File: Level\_1.java** is the driver program for Level 1.

**Input:** The input can be given in form of the file or through the console (standard input as well).

**Output:** In the first line of the output, we print the name of the algorithm run (BFS, DAG, Dij, or B-F), the sum of shortest path lengths from s to every node of G that is reachable from s. If |V| is less than or equal to 100, in the next lines, we output the lengths of shortest paths from s to each vertex u in the graph that is reachable from s, and the predecessor node of u in that shortest path. If there is no path from s to a vertex, we print INF as the length.

**Level2**

**Driver File: Level2.java** is the driver program for Level 2.

**Input:** The input can be given in form of the file or through the console (standard input as well).

**Output:** In the first line of the output, we print the sum of number of shortest paths from s to every node of G. If |V| is less than or equal to 100, in the next lines, for each vertex u, we output the length of a shortest path from s to u, and the number of shortest paths from s to u. If there is no path from s to a vertex, we print INF as the length, and the number of paths as 0.