INPUT / OUTPUT FOR C++ IMPLICIT COORDINATION ALGORITHM

INPUT

- start.txt : file containing on the 1st line, the planning horizon. On the 2nd line, the discount factor. On the 3rd line, the number of graph vertices. On the4th line, the list of robots' starting vertices. On the 5th line, the initial belief vector (including b0). On the 6th line, the number of "outer iterations" of the algorithm (typically 1).
    - Example:
      10 *h*
      0.99 *gamma*
      2 *n*
      1 2 1 *v0*
      0.0 0.2 0.8 …… *b(0)*
      1 (inter)
      (In the robots line, robot 1 is at 1, robot 2 at 2, robot 3 at 1)

- M.txt: file containing the targets' motion model matrix, including the 1st row / column with zeros as a flattened array. [1 0; 0 M] → bigM as 1 row
    - Example:
      1 0 0 0 0.5 0.5 0 0 1
- C.txt: file containing the capture matrices as flattened arrays. Syntax: searcher_id, vertex_id, capture_matrix
    - Example:
      1 54 1 0 0 1 0 0 0 0 1
- adj.txt: file containing the adjacency list describing the graph. 1 vertex for each line.
    - Example:
      1 2 4
      2 3 6 4
      Etc (Vertex 1 is connected by an edge to 2 and 4)

OUTPUT

- paths.txt: file containing, for each line, the path computed for each robot (from step 0/starting vertex)
    - Example (2 robot, horizon 5):
      1 10 9 8 7
      2 5 4 1 2

- solver_data.txt: file containing the solver results. 1st line time in seconds, 2nd line objective function value.
    - Example:
      2.1
      1.33

USAGE

- Place all the input files belonging to the same instance in a common folder inside the “data” folder.
    - Example: /data/test/
- Execute the program passing the folder name as a parameter.
    - Example: rosrun implcit_coordination implicit_coordination test
- The output files will be placed in the “log” folder, in a directory with the same name as the data directory.