Output File Format: MAPF Simulator (`./lifelong`)

The output file of **./lifelong** is a JSON file containing the planner's output, actual paths of robots, and statistics related to the simulation. The table below describes each property in the output file in detail.

actionModel (String)

The name of the action model used in the simulator. Always "MAPF_T", indicating MAPF with Turnings (robots can be oriented in 4 directions; actions: forward, clockwise turn, counter-clockwise turn, and wait).

AllValid (String)

Either "Yes" or "No". Indicates whether all actions returned by the planner are valid.

teamSize (Int)

The number of robots in the simulation.

start (List)

List of start locations. The length of the list equals the number of robots.

numTaskFinished (Int)

Total number of tasks successfully completed.

sumOfCost (Int)

Total cost (sum over all robots).

makespan (Int)

The maximum completion time among all robots.

actualPaths (List)

List of n strings (n = number of robots). Each string is a sequence of action symbols separated by commas:
• "F" – Forward
• "R" – Clockwise rotate
• "C" – Counter-clockwise rotate
• "W" – Wait
• "T" – Implicit wait (only in plannerPaths for planner timeout or missing actions).

plannerPaths (List)

Same format as actualPaths. Represents the planner's intended paths for each robot.

plannerTimes (List)

List of planner execution times (in seconds) for each planning episode.

errors (List)

List of errors. Each error is [robot1, robot2, timestep, description]. robot2 = -1 if only one robot involved.

events (List)

List of task events. Each event is [timestep, id, description]. Description is either "assigned" or "finished".

tasks (List)

List of tasks. Each task is [id, source, target].