

# Testing

**N = 10** # The size of the battlefield (grid size)

**M = 15** # Total number of soldiers; Soldier IDs start from 1

**t = 5** # Time interval for launching a missile (in seconds)

**T = 40** # Total duration of the battle (in seconds); The number of missiles fired will be  $T/t$

**Si = [0, 1, 2, 3, 4]** # Possible speeds for soldiers; Each soldier's speed is randomly selected from this list

Just after running the Client and server

- The server script starts by initializing various parameters and data structures, including the battlefield layout, the initial commander, and information about all the soldiers.
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- It also configures the server to listen for incoming XML-RPC requests on a specific port (port 8000).
- Once both the client and server are running, the client server (XML-RPC server) is actively listening for incoming requests.
- After the initial setup period (10 seconds by default), the server begins simulating missile strikes. These strikes are generated at random positions with random impact radii.
- When a missile strike is simulated, the server:
  1. Notifies the client about the missile's approach and its impact radius.
  2. Checks for casualties among the soldiers based on their positions, speeds, and the missile's impact area.
  3. Updates the commander's status and may trigger an election of a new commander if the current one dies.
  4. After The missile Approaching the soldier moving according to safe zone and can be saved from Killed.

5. Server Is giving List of Dead and Alive soldier.
6. At the end Server is Calculation and giving result of war .I.e. if the number of alive soldier  $\geq 50$  than War is won.

**The case which are getting failed: -**

1. After the commander is killed Its not getting update in Map.
2. On client side The notification with address is not publishing .At the last moment something happened because of debugging.