LABORATORIO DI INGEGNERIA DEI SISTEMI SOFTWARE

Introduction

Requirements

Req1 : percorrere (una volta) il bordo perimetrale della stanza rappresentata nella scena di WEnv

Requirement analysis

Problem analysis

The client can interact with WEnv using both **synchronous** and **asynchronous** communication protocols.

HTTP POST	WEBSOCKET
• application layer • messages sent on port 8090 • request/response protocol • easier for testing	• messages sent on port 8091 • bidirectional: the server sends a message with the outcome of the command • use of annotations

After discussion with the client, it was agreed to use **HTTP** as communication protocol.

Test plans

Project

To cover the boundary of the room, the robot must

- **move forward** along the wall
- when reaching the end, the robot must **turn left**

for **4 times**. The boundary is entirely covered when the robot has travelled along the four walls: wallUp, wallRight, wallDown, wallLeft.

Testing

- A possible testing solution is to have the robot **colliding** with the opposite wall, followed by a **90 degree rotation** to the **left**.
  In this way, the robot will walk the boundary counterclockwise since its home is located in the top-left corner.

- If the **size of the room** and the **speed of the robot** are known, I can check how long it takes for the robot to **reach the opposite wall without colliding** with it.
  After walking a wall, the robot must rotate only once.
- At the end, the robot must be in the **HOME** position and it must have collided with the 4 walls

Deployment

Maintenance

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