

# Progress Report

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# Chapter 1

## Where did I get to at the last report

At the last report I have finished at:

- Doing research on the Robot operating system.
- Started constructing an emulation system for point at click
- Started thinking of an outline for the GUI.

While it may not be an extensive list of things to be completed it is important to note that ROS is still a growing system with a small community that has a lot of room for improvement. This has provided me with a lot of struggle and glitches that will be discussed in future chapters.

## Chapter 2

# Progress since last report

Since the last report I have managed to complete:

- Constructing the point and click map emulation of a robot in 2-D environment.
- Finished constructing a CLI for the robot to move between assigned rooms in the robot server.
- Started working with the server to create a web oriented GUI.
- Started working on the GUI.
- Started work to start considering ways in which involving multiple robots will be possible.

Before the last report, I have managed to get over most of the glitches of ROS wikis with the help of community and API lookups that has opened opportunities for me and greatly sped up my work which allows me now to start working on more interesting part of the project than having to go through all the glitches that caused a great loss of time in the project.

With the success of the emulation I have started assigning rooms to points in the map that allowed me to construct a CLI for the project that works by entering room numbers based on the success of the robot reaching the goal which I consider to be a great achievement as it opened doors for me to work outside of ROS framework while keeping integrity of the emulation and start working with data outside of the RViz emulation environment.

After developing the CLI, I have managed to start connecting the ROS system to the server that will allow me to finally start finishing up the GUI and the multiple robots section of the project, once finished will allow me to start working on various tests that will test how the human element in this project will influence the efficiency of treasure retrieval in the game.

## Chapter 3

# Future goals

Things that I aim to complete by the next progress report:

- Finish the GUI.
- Finish implementing multiple robot environment.
- Fix glitches regarding local costmap causing the robot to bump into obstacles.
- Start working on multiple modes of emulation(With and without human element) and user testing for the project.