Topic Selection (What subsystem / behaviour will you investigate):

We aim to explore the entire map. The information should include: locate line position, locate obstacle position and find the treasure.

What will you implement:

Minimum expectation ( We must…):

Explore at least 50% of the map. Allowing re-exploration

Normal expectation ( We should…):

Explore at least 75% of the map. Allowing limited re-exploration

Stretch Goal (We could…):

Explore the entire map. No allowance for re-exploration.

How will you assess the success of your work?

* What experiments will you conduct?
* What will you measure?
* What do you expect to see?

We are building a digital map in grids, there are three possible labels for each grid: visited, not visited, obstacle and line. These grids are going to be updated during the exploration, depend on the simultaneously localization and the sensor reading.

If there’s no not visited grid, it demonstrates the completeness of the coverage. Or we can compare the number of grid labelled as not visited and the total number of grids, in order to calculated the portion of exploration.

Proposed timeline (**Must** include a cut-off date for implementation work and provisional division of work)