# Final Project：Designing Your Own World for Turtlebot3 Navigation

## 1. Introduction

In this final project, you will have an opportunity to showcase the knowledge you've gained from this course. You are requested to design a new Gazebo world with one turtlebot3 of the type of your choice (burger, waffle or waffle_pi) spawned in. You need to satisfy the following requirements.

(1) There should be at least 6 objects of 3 different models in your world, your world can be either a closed or an open world.
(2) You need to create a map of the world by moving the robot around.
(3) You need to drive the robot moving around the world and arriving at the destination by using a program.
(4) You need to understand your program used to drive the robot, and be able to explain it in your presentation.
(5) You need to prepare a presentation of 15 minutes using PPT to cover the main points of ROS you've learned in this course, and the detail of the project you've completed. Your presentation will be followed by a 5-minute Q&A session.

## 2. Assessment

Your work and presentation will be assessed using the following table.

Name_____    Time Start_____        Time End_____

| Items and Percentage | Description | Marks |
|---|---|---|
| Preparation (10%) | A well prepared ppt document usually has balanced text and illustrations like figures, data, etc., to help your explanation. It should also be well structured and easy to understand. | |
| Content (20%) | Concise, unbiased, matching the topic of your choice, and well organized. | |
| Knowledge (20%) | Reflect your acquainted knowledge as well as your research ability on new knowledge. | |
| Communication skills (20%) | Speaker needs to communicate efficiently in the presentation; Eye contact with audience; Ability to inspire audience, etc. | |
| Organization (20%) | Overall presentation performance; Smooth transition between speakers; Interaction with audience, etc. | |
| Answers to questions (10%) | Ability to defend your ideas; Ability to interact and inspire audience; Responsiveness to questions. | |
| **Total:** | | |