Mobile Robotics
Assignment 2

Using knowledge gained from previous labs and support from online resources,
Implement a project that fulfils a task of your choosing. The task should use a minimum of two sensors to help the robot react to its environment (unless sufficient complexity is reached with one sensor). The task will be judged on complexity and completeness – although it is necessary to have the robot attempt the task during a demo.

The task should be sufficiently complex – examples including:

- Finding a route through a maze or obstacle course.
- Mapping a bounded area (e.g. a box) and estimating the location of any obstacles in it.
- Moving an object from one location to another – using some dynamic sensing to locate the target.
- Kinematics/odometry library

NOTE:
Don't forget to test each behaviour individually before attempting to run the final program.

This assignment is worth 30% of module marks. You'll have the next 4 labs to test your code. You can develop outside classes and use the labs for testing. You need to submit the code and a short report.

Submit the code and repport via Brightspace by the end of the lab on 18/04/23, at 16:00.

Include the group members' student names and numbers at the top of every code file.

Marking Scheme:
The code must be well designed and clearly described. 12 marks will go to code quality, 8 of those for implementing behaviours.
10 marks will go to the success in performing the tasks described.
8 marks will go for the report. The report should briefly describe the task and how you employed the robot facilities to achieve this objective (what features did you employ: sensors, servo motor etc.). The report should be short – approx. one or two pages.

Demos are mandatory and are scheduled for 18/04/2023 and 25/04/23.

POLICY ON PLAGIARISM: facilitators and perpetrators both get zero. Do not keep your code in public Git repositories.