INF2004

Embedded Systems Programming

Shape

Proposal

Shape

Team 16

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| **Member** | **Student ID** |
| Ang Hui Lun | 2201377 |
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**Project Topic:** *Intelligent Autonomous 2-Wheel Robot Car*

**Updated Task allocation:**

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| **Task** | **Action By** |
| 1. Barcode Recognition    1. Infrared sensor to decode barcode 2. Sensor Integration    1. Infrared sensor for line following and barcode recognition | Ang Hui Lun |
| 1. Navigating and Mapping    1. Implement maze mapping and coordinates tracking    2. Figure out cell creation and navigation logic for maze    3. Apply appropriate algorithm for optimal maze navigation after maze has been mapped | Phileo Teo Weihan |
| 1. PID Controller    1. Implement accurate control of car’s movement    2. Speed control, steering control, distance tracking    3. Integration with other sensors 2. Sensor Integration    1. Obstacle detection using ultrasonic sensor    2. Integration with L298N motor controller 3. Assembly of car 4. Testing and refinement | Ryan Lai Wei Shao |
| 1. Sensor Integration    1. Magnetometer 2. User Interface    1. Figure out how to interact with robot car using Bluetooth and Wi-Fi    2. Choosing a platform to design a simple UI that draw the maze based on robot movement    3. Research on maze mapping    4. Implement a feature that initiate the robot from UI    5. Testing and debugging of the user interface    6. Visually display sensor data on the UI | Jeffrey Yap Wan Lin |