Work Report Summary

Date Assigned: 3rd April, 2019
Date Submitted: 7th April, 2019
Name: Simran Malhotra
Subsystem: Coding

WRO 2019 **Progress:**

- ➢ Path Planning:

  - o Tested FourSBase navigation code.
  - o The bot was tested for linear motion, on point rotation and motion at a specific angle.

  https://github.com/RoboManipal-9-0/Coding-FirstYears/tree/Simran/Serial_Test

- ➢ Open MV Colour Detection

  - o Completed Colour Detection code along with detection of which colours are most prominent.
  - o A list is displayed on the Serial Terminal in descending order of their prominence.

  https://github.com/RoboManipal-9-0/Coding-FirstYears/blob/Simran/Colour_detection.py

- ➢ Encoder Motor

  - o Worked with Rotary Encoder (lpd3806-400bm-g5-24c), Motor driver(MD30C) and Encoder Motor(RMCS-2284) and tested their functionality.
  - o Also installed the PIDController library. PID Functionality for the encoder motor is to be implemented later.

  https://github.com/RoboManipal-9-0/Coding-FirstYears/blob/Simran/Encoder.ino

Issues Faced

*Path Planning***:**

- ➢ Electronics: Initially there was some issue with the wiring and the Arduino getting fixed on the Vero board but later they were resolved.

*Open MV Colour Detection***:**

➢ Faced difficulty distinguishing orange and red.

➢ This was fixed by alternating the threshold values and now it is working to a great extent.

➢ Thresholds need to be adjusted every time the lighting of the surroundings change which results in colours being detected incorrectly or not being detected at times.

*Encoder Motor***:**

➢ Was unable to test the code, the motor got jammed.