DESIGN EXPERIENCE WITH DEVICES (DEWD)

EE - 2800, Sec. 01, FALL 2018, FINAL Raspberry Pi Project, Total Points: 75
Stage 1 (Points 30): Due on 12/18/2018 by 4:00 PM

Stage. 1

The following tasks have to be implemented on the Mobile platform (Tank).

- Wire an appropriate circuit using the H-Bridge to control both the left and right motors. A single GPIO pin should be used to enable both sections of the H- Bridge. Examine the given template code – MobilePlatform.py to determine which GPIO pins should be used to (Points: 5)
- Using the Object-oriented programming template code in **MobilePlatform.py, Bridge.py, and RotationDevices.py**, implement the following tasks (Points: 25):
    - Complete the code for the Tank to travel in the reverse direction.
    - Develop code to accelerate and decelerate the Tank.
    - Develop code to have the Tank take a left turn (approximately 90 degrees) while traveling either in the forward or reverse direction.
    - Develop code to have the Tank take a Right turn (approximately 90 degrees) while traveling either in the forward or reverse direction.

Stage 1 Submissions (Submit in the folder of one of the team members):

- A video depicting the implemented functions satisfying the requirements below:
    - The video should have an introduction (team members announce their full names)
    - The video should show the Tank operating on the floor.
    - Every operation should be demonstrated with an audio announcement of each operation to be performed.
- Commented Python code: If new code implemented in the template files are not commented, a penalty of 5 points will be assessed.