

COSE421 Embedded Systems

Assignment #5

No late turn-in accepted

You want to control the toy vehicle via UART. Assemble the toy vehicle and make necessary connections. The UART terminal on your PC should display the following menu for taking the keyboard input. Show the same menu after a selection for the next selection. You are free to use C, assembly or both (C + assembly mix).

<On Tera Term Terminal>

```
----- Vehicle Control -----  
1. Forward  2. Backward  
3. Speed Up 4. Speed Down  
5. Left turn 6. Right turn 7. Stop  
-----  
Select:
```

For the left turn, the left wheels reduce the rpm (revolutions per second) and the right wheels increase the rpm. **For the right turn**, the opposite should happen. The rpm should be the same for the **forward** and **backward** selections.

What and How to submit:

1. Upload **your code (both C and assembly)** to Blackboard.
2. Upload **video clip (3-min?)** to YouTube and provide the link to Blackboard. Your video clip should have **at least** the following contents:
 - Your smiling face
 - Understandable explanation of HW connections and SW
 - Demo with Tera Term terminal

Note: This is an individual assignment. You are welcome to discuss, but **DO NOT COPY** solutions. If you are found to copy solutions from others or slightly modify the solutions from others, both of you will be given 0 credits.