In this project, we will interface with various peripheral devices, namely the EEPROM module and the TFT display. Optionally, we will interface with a RTC. We will combine the functionalities from all our past projects into this final project.

**Objective 1:**

Draw a flow diagram showing the logic to implement the objectives as described below.

**Objective 2:**

Implement I2C to save a high score to the on board EEPROM. The score is a two byte number. Enter the score manually through the UART terminal to test it, and ensure when the power is cycled the value entered returns.

**Objective 3:**  
Draw wireframe diagrams of each screen for the game. You will have a home page, a play screen, and a high score screen. You may also add additional screens if you like.

**Objective 4:**

Create the Rally-X logic for the map and the car. The car moves about the display using the joystick. Collision with the walls causes the game to end. On the map are randomly placed ‘flags’ where collecting the flags increases the score. The game speed is controlled by the PC0 analog signal (MET2230 for undergrads).

**Bonus Objective 5:**

Add sound using the on-board Piezzo buzzer

**Bonus Objective 6:**

Map procedurally generates to expand the game zone

**Optional Objective (Bonus for everyone):**

Implement enemy cars and the side window.

Follow proper coding practice and add a program heading to your program with your name, date submitted, course number, description of the project in your own words (not the given description, description of every function, or major part of the program), how the program can be used by a user, and include meaningful comments for instructions or actions and the functions used as necessary. This has to be done for all programs that you submit throughout the semester.