

Project 3 Report

By
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Report Summary:

The purpose of this project is to create a vehicle racing game by displaying graphics and being able to properly operate the buttons such as the joystick and button on the microcontroller. The vehicle essentially has to move so it can dodge incoming obstacles from the horizon. So the objective of the program is that the vehicle keeps moving forward and dodging the objects and as long as the vehicle doesn't hit any obstacle score increases. Also as one plays through the game, he or she has 3 lives. So every time the vehicle hits an object it loses a life, till there are no more lives.

Report Description:

So for my project I was trying to demonstrate the aspects as mentioned in the report summary. For my project I was able to achieve majority of the aspects, but I wasn't able to fully complete it. In my project I was able to create a splash screen that was able to last for 2-4. After the splash screen it loads the main screen. In the main screen I created an enum for the different selection options. To play the game, the top scores, and how to play the game. If you click the top scores it lists the best 3 scores at least that was shown in the golden solution. However in my program, I wasn't able to replicate the list of the top scores. It would just take you to that graphic page without displaying scores. I believe this because it wasn't incrementing in scores. I was able to create an explanation page after clicking the how to play option, which describes the gameplay. Also on the main screen I have created a cursor which moves through all options. The main part of the game and the majority of the program is the actual gameplay. This part of the project I wasn't able to get everything to work. The thing for me that didn't work was the increment in score and lives. It should have decremented in lives and incremented in score as the player continues to play. I believe this is because it wasn't able to transfer the data from my struct to decrement it. However I was able to make the game 3D and get the objects to come forward and it would come in 3 different lanes. I was able to move the object left and right and was able to move it and dodge the object. And if the vehicle does hit the object the red LED. Also since the score and life weren't working I wasn't able to create a Game Over screen. Despite a few features I was able to get a majority of the code to work.

Using Joystick:

Essentially for the joystick I was able to create the location of the cursor in respect to the other locations of the enum. There was a small delay on the cursor, but I was able to solve that by making sure the clock timer was efficient.

Images:

