Project Proposal

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**CMU Buggy Racers**

Cmu buggy racers is a 3rd person racing game that includes features such as random track generation, opponent AI, and side scrolling. Players will be able to use the keyboard to “race” their buggies around a track. Edges of the track and other obstacles will slow them down while staying on the track will increase speed slowly. The goal is for the completed project to have background music, character choices, and a competitive AI opponent. Also, I would like to be able to have pictures for the “buggies” that look like CMU buggies.

* **Competitive Analysis** [2.5 pts]: A 1-2 paragraph analysis of similar projects you've seen online, and how your project will be similar or different to those.
* **Structural Plan** [2.5 pts]: A structural plan for how the finalized project will be organized in different functions, files and/or objects.

MyModalApp

I’m using mymodal app classes to create the different screens for my game. Most of the code will be in the GameMode class.

StartMode

This is just a splashscreen for the game that goes to the MenuMode when any button is pressed. I

plan to put a picture of CMU or of Buggy on this screen.

MenuMode

This will be used for any extra screens I need like instructions, picking characters, and starting the game.

GameMode

This is where the actual game code will be. I will draw the track and racers here, as well as do controls for speed and stuff.

PickPlayerMode

Just going to have like different colored buggies to choose from. Has a back button to go back to the menu.

Racer class

This will build the characters, both the player and the opponents. Opponent will be a subclass of racer most likely. Contains information such as the name, color, coordinates, and the x and y speeds.

Create Track

* **Algorithmic Plan** [2.5 pts]: A detailed algorithmic plan for how you will approach the trickiest part of the project. Be sure to clearly highlight which part(s) of your project are algorithmically most complex, and include details of the algorithm(s) you are using in those cases.

* **Timeline Plan**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 11/29 | 11/30 | 12/1 | 12/2 | 12/3 | 12/4 | 12/5 |
| Player able to drive around track with a finish line | Random track generator done |  |  | AI component working | Pictures/graphics |  |
| 12/6 | 12/7 | 12/8 | 12/9 | 12/10 | 12/11 | 12/12 |
| Adding items | Adding music |  | Due date |  |  |  |

* **Version Control Plan** [1.5 pts]:

I’m using Github to back up my code.

Graphical user interface, text, website

Description automatically generated

A screenshot of a computer screen

Description automatically generated

* **Module List**
  + N/a

Sources:

http://www.cs.cmu.edu/~112/notes/notes-animations-part3.html#sidescrollerExamples

<https://twitter.com/cmubuggy>

<https://www.cmu.edu/brand/brand-guidelines/visual-identity/colors.html>

<https://stackoverflow.com/questions/36620766/rotating-a-square-on-tkinter-canvas>