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<div align="center">Conceptual Pitch</div>

Summary

The final project idea that I have chosen will be called "Traffic Hater". The idea for the game is a vertical 2D racing game. The player controls a car, with obstacles coming down, the player has four lanes which they can switch in between to avoid these obstacles. The game is timer based and points work on a system of time, where the longer the player survives, the more points he scores. The obstacles in the game will be simple road objects, trucks, cars pedestrians, big rigs, road blocks etc... The game will progressively get faster as the game goes on, making it harder to avoid the obstacles. For the design aspect, I was thinking of using an old retro look, comprised of simple shapes and colors, or using actual images to give it a more modern look. The game will start with a menu, featuring the controls, how to play and a start game. When the game starts, the screen will feature only the road and your car, however after five seconds, the obstacles will start to appear, if the player hits an obstacle, the game is over. (If applicable, on contact, the car "explodes"). The game will also feature an end game, where the game will stop and display your final score and time survived. The game will also feature power ups, such as invisibility and rockets, however, to balance the game, some obstacles will be interactive, for examples, oil spills will make your car slide, losing the ability to change lane for 2 seconds, or potholes, which will force your car to change lane.

Media

The game will be in a similar layout to these pictures.
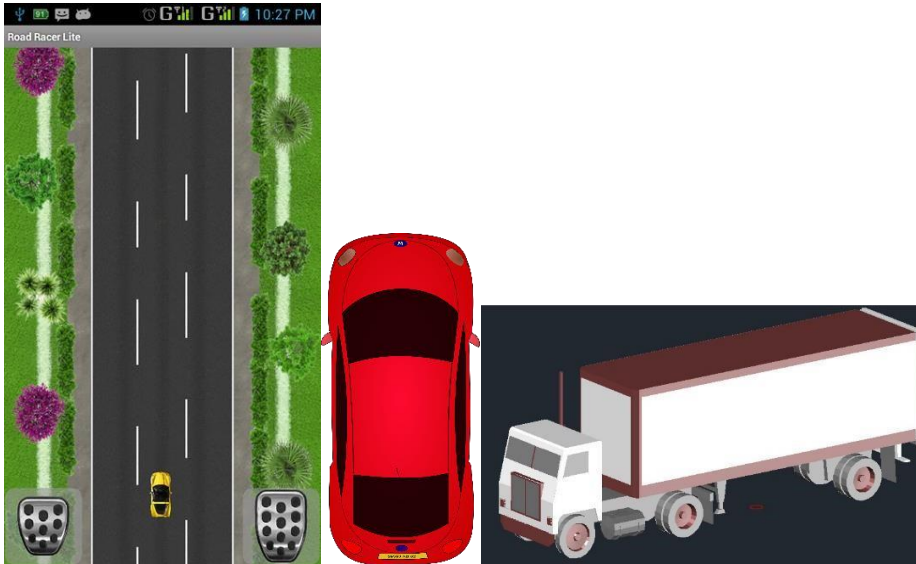
This will be the modern look, the objects will feature actual objects, not just sprites and blocks, cars and trucks however, will be different colors, and sizes, there will be a variety of them.
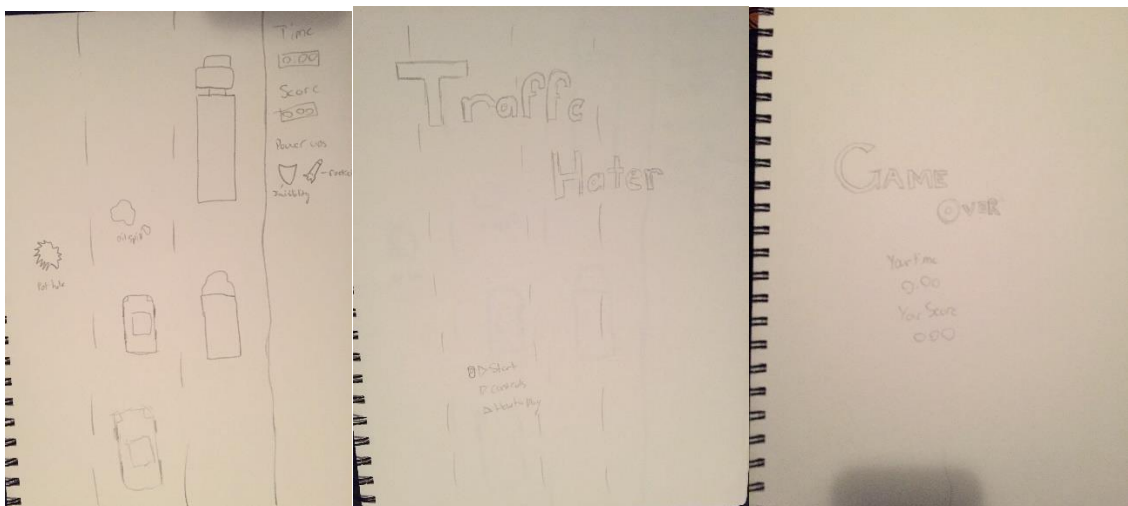
The picture on above on the left are the sprites, and in game layout. These are rough sketches, where the sprites and details will be created in more detail in photoshop and

illustrator. The picrure on the right will be the main menu, where you have the background of in game, the three menu options and the title. The last picture will be the end game layout, where it displays the time and score, the in game layout will also be featured in the game over menu.

Inspirations

The project will be based off of previous 2D racing games, with the similar format. My project was also inspired by other racing games, such as Mario Kart, with the power ups and the AI difficulty increasing. In Mario Kart, you can choose three difficulties, 50CC, 100CC and 150CC, which is the speed of the AI, my game adopts this aspect, with the length of the game, as the time goes on, your car goes faster. The power ups give a competitive edge to the game, in Mario they can favor you and turn the tide of a game, in my game they facilitate the car dodging aspect.

Technical Approach

Arrays will definitely be used in my game, to redraw the background and give an illusion of actual movement within the game. I believe a lot of math tricks will also be used in my program, for example, to spawn in the obstacles, uniform random will be used. Since big rigs are harder to dodge, they will appear less frequently, car will be the most common, and power ups will be rare. I will also have to limit the amount of times that obstacles appear, since they cannot appear all at the same time. I will be using a timer to activate the random loop of spawning cars. I will also be using random to draw the obstacles on the screen, they need to appear in one of the four lanes. The random loop will draw the obstacle in one of the four lanes, instead of anywhere on the screen. Collisions will also be a part in the game,

since the game ends by your car colliding with an obstacle. Your car will be controlled using the arrow keys, left and right to change lanes. The powerups will be used with detection and removing elements, for example, if the rocket hits the car, then the element of the car will be removed. I do think that I will need help with this code, especially invisibility.