The Game Project

Our game is going to consist of a player taxi that exists on a field with three lanes. The player will dodge incoming obstacles by switching lanes. Every time the player switches lanes they will continue to stay within the lane until they choose to move out of the lane. Players will be penalized for attempting to move out of the lanes through some sort of method that will be conceptualized later. The games will exist within a bordered off area of the screen to allow an area that is open to give various information to the player. The game will later use imported graphics from files rather than the simple shapes that graphics.h can create. To achieve this goal, we are going to create three predefined spaces that will be considered the lanes. Each lane will have a numerical value for 0-2 to represent it. The value for each lane is determined from left to right. The player will start at the middle lane. When the the key ‘W’ is pressed, we will get the taxi to switch lanes to the left. Conversely, when the key ‘D’ is pressed, it will switch lanes to the right. When the lane is < 0 or > 2 the player will crash and fail. Random obstacles will spawn into the lanes at a set interval based on how far the player as gotten. We will work on a number for preset patterns that the game can call upon for player to face. This gives players the ability to learn how to deal with various obstacles as well as lets players be able to “master” the game. As the game progresses some patterns will be phased out and new more difficult patterns will take their place. We have decided that thresholds for difficulty will be based on time. Time elapsed will be counted on the side, which will be used to determine score.

We also want to figure out how to import a bitmap image into the graphics console that will serve as the sprites. However we have no idea how to do that yet and googling hasn’t done us any service. We still plan to pursue this because otherwise the game would look quite boring with simple shapes as characters. We will also keep track of multiple objects at once and destroy extraneous objects which have left the screen in order to save space. We will also have to figure out timing for any premade obstacle groups so that they will not overlap. Collison detection should be easy because the objects can only “collide” at three different predetermined points. So the only issue that may occur is if the player moves the taxi into an object. This should be easily rectifiable. Integrate music into the game without it opening a program like windows media player. This will help add to the experience of the game. Another thing we can try to learn is organizational skills for the program so we can actually figure out what we did prior to debugging.

We will also have to ensure no objects are lost during the game as the program redraws the frames. There is also an issue that the boxes will flash in and out of existence while the computer is redrawing the frames. The biggest issue however, is making this game aesthetically pleasing to the eyes. This we find important due to the mostly simple nature of our game so it will be important for the graphics to be beyond that of rectangles and circles. Please offer us guidance on this part if you don’t tell us anything else.

So far, we have created functions to generate the obstacles, lanes, and the taxi. We have also created a function that displays “FAIL” if a crash occurs. Right now, using random numbers, obstacles spawn in any of the three lanes and move down towards the player’s taxi, which is currently represented by a yellow rectangle. In addition, our code measures and updates time elapsed as a method of keeping score. However, we still have to figure out how to get the time elapsed to display on the screen in some form along with the “FAIL” when a collision occurs. Most important, we still have to get the controls for the movement of the taxi, which as of now is still stuck in the middle lane. However, our biggest challenge will be coding the game to be visually appealing without sacrificing efficiency. The biggest help that Mr. Hudson could give us would be if he showed us how to import images into the graphics window and how to manipulate them similarly to shapes. Despite many issues that still have to be addressed, we are optimistic that our game will function well.