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WSOA2006 Assignment 2

Written reflection

The endless runner game I created requires a player to avoid popping a balloon on various obstacles. The main theme of the game, being the balloon floating upwards, came from a game of a different genre called “Rise Up”. The obstacles encountered are windowsills or balconies with a cactus at the edge, which can appear on either side of the screen, and paper planes which fly across the screen.

To move the plane left and right, the player must tilt their device left and right. The balloon does not change its position linearly, but rather has its velocity increased in a specific direction over time. I chose to do this, as well as choosing not to use touch controls, as it is supposed to make the player feel as though they are an external force (specifically the wind) influencing the balloon rather than a person. The balloon cannot move off the screen, which implies that there are buildings preventing the balloon from moving further.

During the creation of the game, I experimented with various ways of implementing the player movement. Initially only the position of the player was changed based on the tilt of the device, but I found the movement too rigid for a balloon. Next I tried using the AddForce function, but this resulted in the balloon getting stuck at the sides of the screen constantly. Finally, I decided to change the horizontal velocity of the balloon, and got it moving smoothly after some playtesting. I tried to create a small range within the tilt of the device where the balloon would remain stationary, but even with a very small tilt range the balloon stopped moving smoothly, so this was removed.

To create a sense of increased difficulty over time, the rate at which the obstacles pass the balloon increases to a maximum speed. After passing a certain number of the cactuses, the paper planes start spawning as well. As the paper planes are slightly more challenging to avoid due to their movement, there is a slightly lower chance for them to spawn.

Due to the overall speed of the game increasing over time, two main challenges were faced. The first challenge was balancing the speed at which the obstacles move and the rate at which the obstacles spawn. There had to be enough space between the obstacles for the player to move, but not too much space that the game became boring. The second challenge was balancing the speed at which the paper planes drop and the speed at which they move across the screen. If the horizontal speed is kept constant, the paper planes either stop being a threat as they end up being too high, or make it impossible to pass them if they are too low.

Initially I wanted to create a three-lane system, with obstacles that can spawn in all three lanes, but due to limited time and artistic ability I could not create an obstacle for the middle lane that matched the overall theme. I found it quite challenging trying to balance the various changing values (the horizontal and vertical speeds and the spawn rate), and even though the final values are not perfectly balanced they produced the best result of the values that were tested.

Overall I found this assignment quite enjoyable. I felt a great sense of achievement seeing my game on my device for the first time, and being able to interact with it using the gyroscope.