

## Test 1 - Flappy Bird Clone - 5%

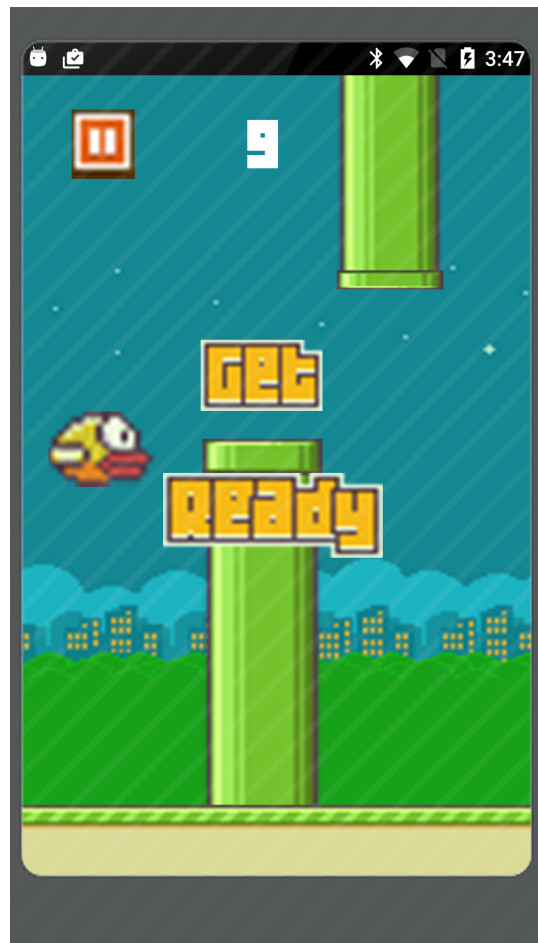
Today your task is to recreate the hit mobile game **Flappy Bird**, within the given time of the class. This is considered a **test**, so you cannot share code or work in groups. All work must be done individually. This is an open book test, so feel free to use previous labs as guidance.

**Failure to submit the test by the end of the class will result in a zero.**

Download the lab materials on Blackboard. You may use the starter project on Blackboard named **LabTest.zip** or create a fresh SpriteKit project and use the **classes** and **images** inside **LabTest.zip**

Using the given classes within the project and the YouTube video as reference, you must **try your best to recreate an exact replica of this version of Flappy Bird** (<https://www.youtube.com/watch?v=fQoJZuBwrkU>), which includes:

1. **Using the assets provided, create** the start screen using a Screen class. Once the player presses start, the game should begin. For now, score button does not have to do anything. **You will be awarded full marks for using a repeating action to replicate the title hover animation used here. (HINT: look at the Youtube video for reference at the 0:10 mark) (0.5)**
2. When the game starts, quickly show the instructions for about 3 seconds **(HINT: look at the Youtube video for reference at the 0:12 mark) (0.25)**
3. The bird must be animated and jumping like how he does in Flappy Bird. **(0.5)**



4. All background layers in the scene must scroll infinitely at a pace similar to the real game **(including the pipes and ground) (0.5)**
5. Using the assets provided create pipes. The pipes positions should be spawned horizontally with different Y values as the game progresses. **(HINT: look at the Youtube video for reference) (0.5)**
6. Using the assets provided create a score sprite. Score should increase each time the bird successfully passes a pipe. **(HINT: Use the number sprites provided for this) (0.25)**
7. A sound should play each time the bird passes a pipe. **(HINT: You can use the sparkle.mp3 sound located in assets) (0.25)**
8. A sound should play when the bird collides with the pipe or hits the ground. I don't mind if you use the same sound or find a different one from a previous lab. **(0.25)**
9. Once the bird collides with a pipe the game will end. Using the assets provided you should replicate the game over screen. You will be awarded full points for using a sequence and/or parallel actions to re-create how this. **(HINT: look at the Youtube video for reference at the 0:48 mark) (0.5)**
10. Using the assets provided create a pause/resume button. This button should be located at the top left of the screen and should allow me to pause the game. Once paused, the pause button should become a resume button so I can resume, and vice versa. **(0.5)**
11. When the game is ended, pressing the Okay button will restart the game. You should add the share button here too button it doesn't have to do anything for now. **(HINT: You do not have to restart the game from the very beginning) (0.5)**
12. Using the assets provided display the best score the player has gotten so far, and the score they got during the previous attempt. **(HINT: look at the Youtube video for reference at the 0:48 mark) (0.5)**

**Submit this as StudentName\_StudentNumber.zip. Make sure code is running and compiling before submitting. Code submitted with compiler errors will result in a zero. Anything submitted past the due time will not be accepted.**