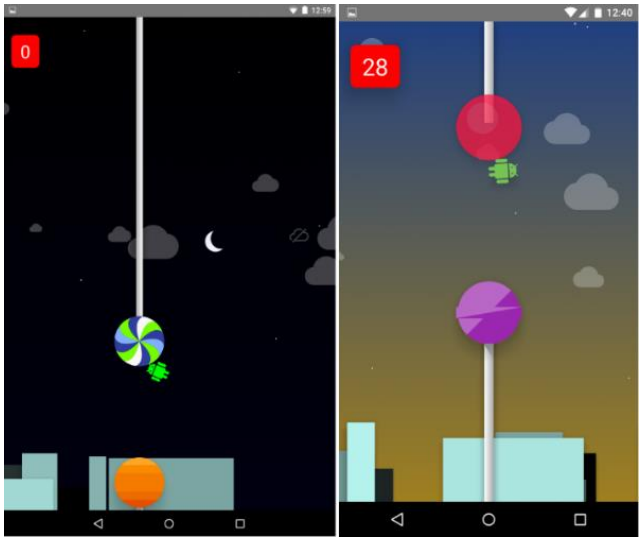
CSCI3310 Mobile Computing & Application Development

Assignment 1

Flappy CU-Phoenix Game

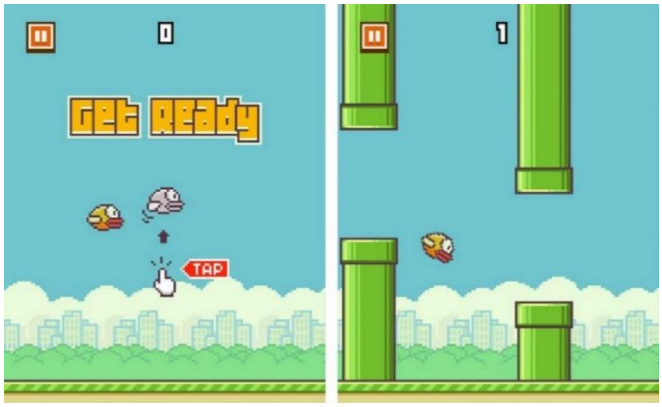
Due : Oct 6, 2017 11:55pm

Game app is the biggest constituent category in mobile application. Android release hidden “Easter Egg” – Flappy Droid game starting from Android Lollipop where the player bounce the Droid robot to avoid hitting obstacles. This is modified from an addictive side-scroller game called Flappy Bird, where the bird is replaced by Droid.

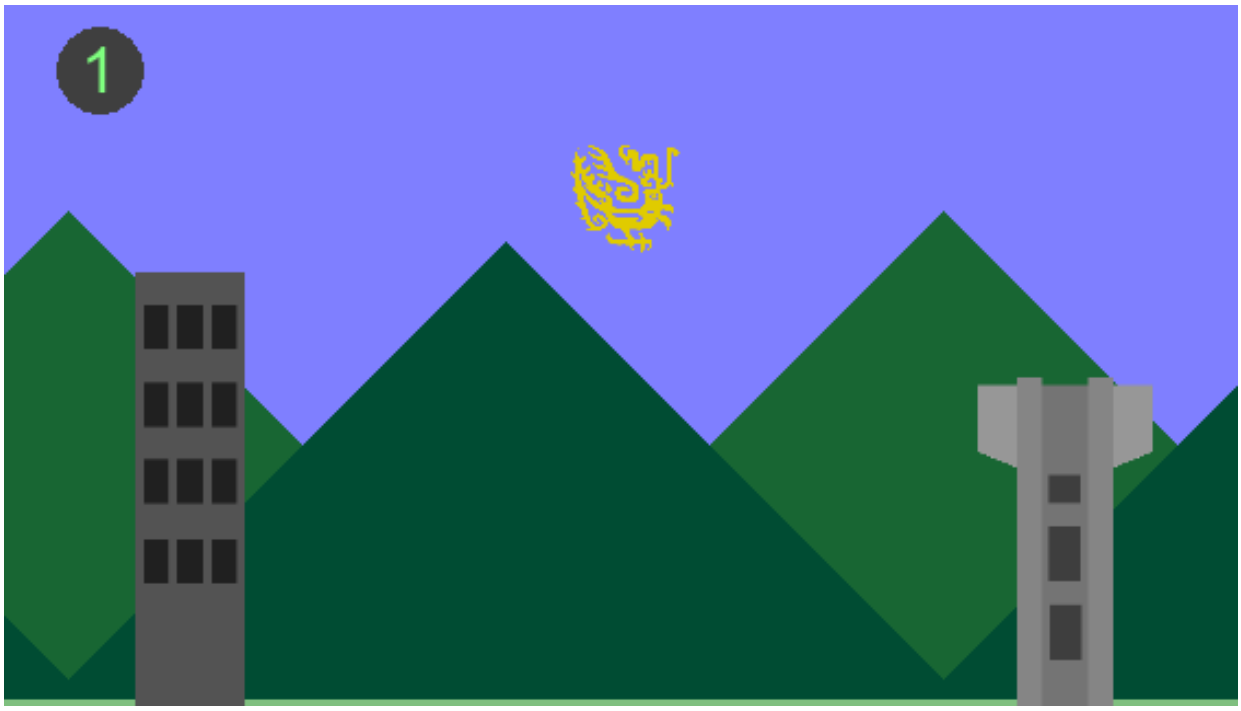


In this assignment, we will implement a simple version of this side-scroller game called Flappy CU-Phoenix, where the Droid or bird is replaced by the Phoenix in the CUHK logo, using Corona. The purpose is to let you have some experience on using the middleware Corona, and touch based UI programming and physics.

Flappy Bird, which is originally introduced in 2013, is an addictive side-scroller (the scene slowly moving towards the left) mobile game where the player controls a bird, attempting to fly between rows of pipes without hitting them. A screenshot is shown as below.

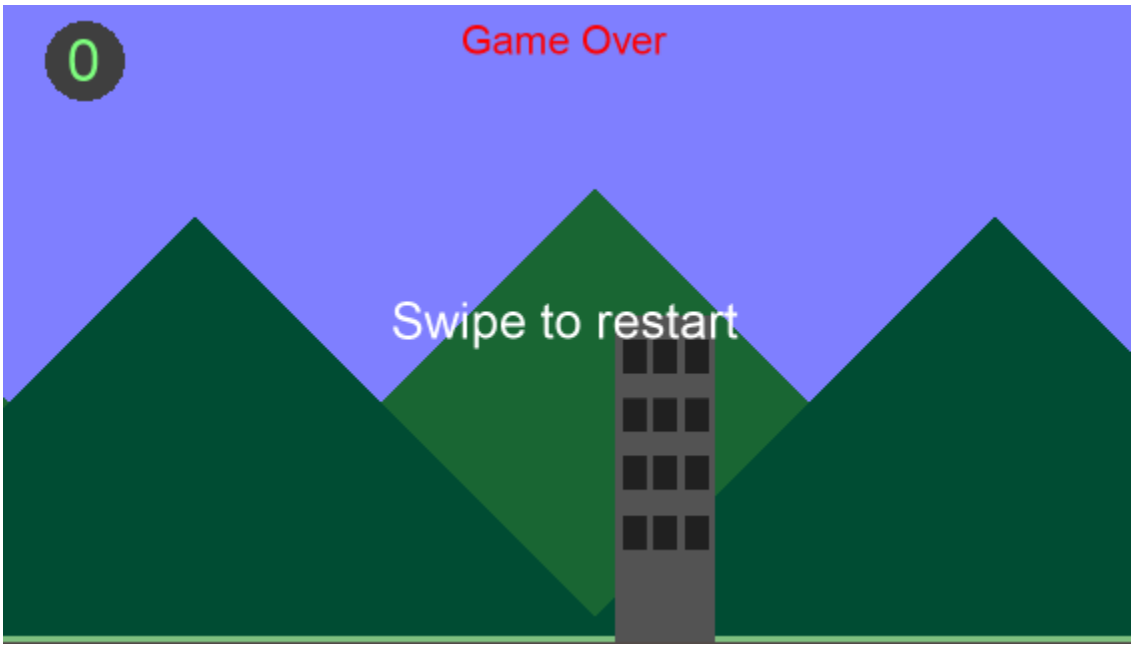


In this assignment, we shall replace the flappy bird or flappy droid with the infamous CUHK iconic “phoenix“. In order to limit the difficulty, you are only required to implement the basic requirement as stated below.

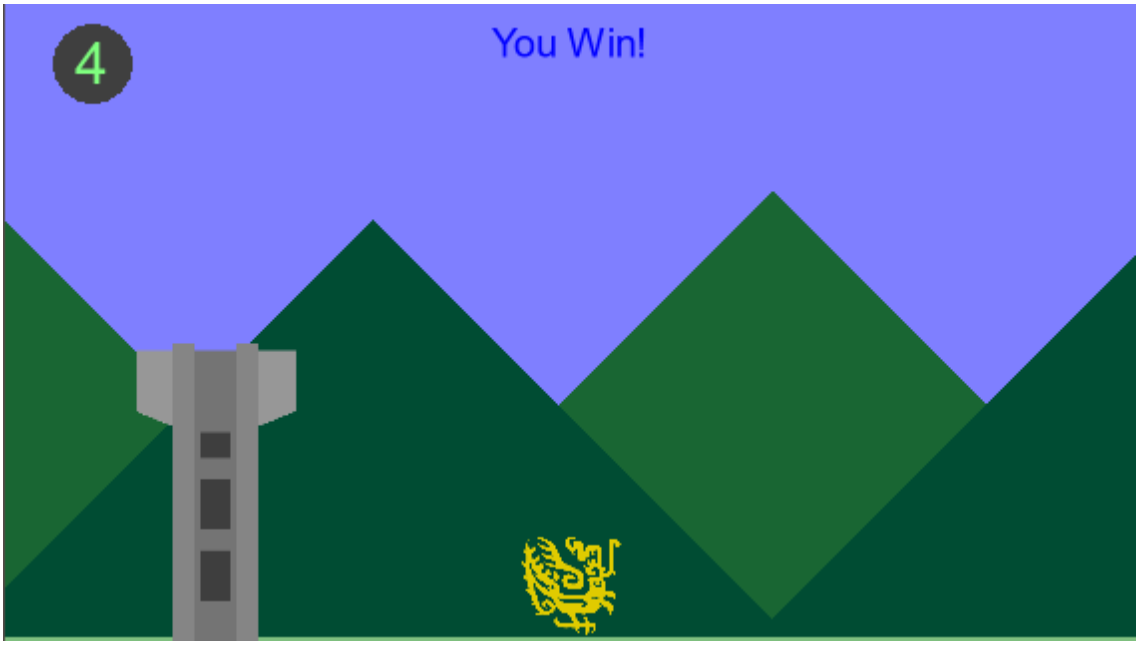


1. We use a screen resolution of **320 by 480**. This will keep the memory resources needed to a minimum.
2. The orientation of the device should be set at "**landscape**".
3. When the game starts, our implementation is that the phoenix will stay at the middle. The background will be slowly moving to the left, creating the impression of the phoenix moving to right. The scrolling speed can be about 4 to 5 pixels per frame under frame rate of 30.
4. You are encouraged to draw something in the background, such as mountains to differentiate the blue background so as to create better impression of a moving phoenix.
5. The player can make the phoenix **flap** up to the air to avoid the buildings and the floor. The air time can be from 1 to 3 seconds. The flap must be triggered by a **touch on** the phoenix avatar. You don't have to implement the rolling of the phoenix in this assignment.
6. A **count** on the number of past buildings should be displayed on the top left corner of the screen.
7. We won't have "pipes, structures or a ceiling" from above in this assignment. The danger to the avatar will only be the **buildings** or the **floor** from below.
8. Buildings or the floor can only be avoided by flapping through it.

9. The phoenix upon colliding with buildings or the floor will die and the phoenix should be **removed,** "**Game Over**" should be displayed at the top-most center location of the screen. User will be asked to **swipe on** the screen center in order to restart the game.



10. There should be at least **2 high-rise buildings** and **2 water-towers** in your game during the patrol period.
11. Once all buildings are jumped, "**You Win!**" should be displayed at the top-most center location of the screen.
12. The screen can either continue to scroll or stop. The minimum scroll time in this assignment is **30 seconds**.
13. There is no need to implement the replay and next level control upon finishing the flaps.



Submission

You should pack all your program and related files e.g. icon file, settings etc. into a folder named 3310_asg1, and zip the folder into the same named zip or rar file, and submitted it into our assignment collection slot in Blackboard system before the deadline, Oct 6, 2017 11:55pm.

Late submissions will risk a mark deduction from 5% to 30% if they are being done within 24 hours after the deadline. Submission later than Oct 9 11:55pm won't be considered.

Reference

https://en.wikipedia.org/wiki/Flappy_Bird

A game play clip of flappy bird on youtube

https://www.youtube.com/watch?v=fQoJZuBwrkU