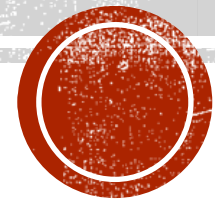


Software Engineering Individual Project

Mengxia Wang



FLAPPY BIRD



Functionality

Basic

- The bird moves forward with a fixed speed
- A player taps the screen to keep the bird flying up, otherwise it will drop
- The bird flying up speed depends on how quick a player taps the screen
- Game over if the bird hits the fixed green pipes obstacles or drops to the ground
- Finally a player gets a score after game over which is the total of pipes the bird has passed

Advanced (nice-to-have)

- The pipe obstacles can move up and down
- Select bird speed
- Multiply player



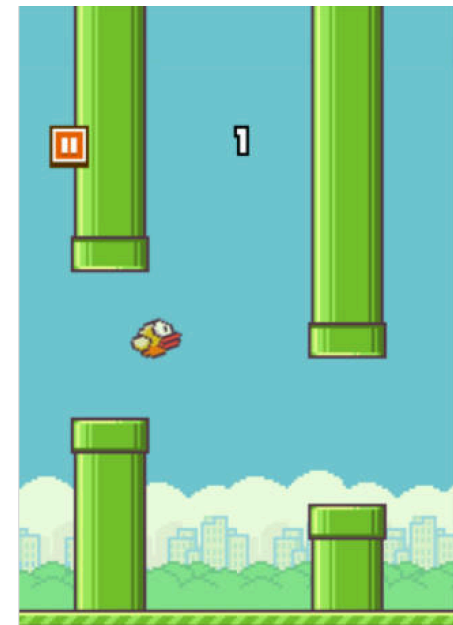
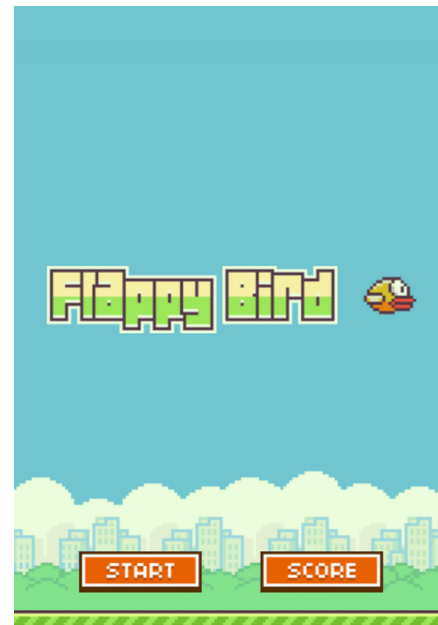
Appearance and Interaction

Appearance

- Bird
- Pipes
- Background scene
- Buttons

Interaction

- Tapping the screen
- Touching buttons (start/score button)



Testing

Automation Testing

- JUnit Testing
- Aiming to achieve very high code coverage
- Benefits: discovering bugs; preventing regression issues; code refactoring

Manual Testing

- Write up test plan to cover all the test cases for each feature and execute the test plan
- Benefits: discovering bugs can't be covered by the JUnit Testing; confirming the game working as expected overall



User Feedback

- Invite friends/classmates/potential users to play the game
- Gather the user feedback/experience from them
- Gather potential bugs from them
- Further improve the game



Documentation

- Commenting code
- Documenting technical details about how the game is designed and implemented
- Writing user guide about how to play the game for the game player



Planning (Using Agile Development)

- Week 1-4: Came up with the idea, presentation/planning, upskilling myself
- Week 5: Setup the Android project using Gradle and investigate relevant third party libraries for the project. Come up with a design for the UI.
- Week 6: Create the UI with the designed start button, background scene and the bird.
- Week 7- 8: Achieve the functionality for the bird interaction: move forward, fly up, drop and Add pipe obstacles to the UI
- Week 9: Improve each pipe obstacles to be randomly generated. Add the score board to the game.
- Week 10: Finalize the game and carry out the manual testing for pre release. Gather user feedback by invite friend to play and further tweak the game.
- Week 11-12: Worked on the advanced (nice-to-have) features if I have time. Release the game to the Google Play store.



FlappyBird



Thank you!!

Mengxia Wang

IET

