Testing Document

PacMan

version: 1

Group F8

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1   TEST PLAN

In order to test the software properly, we will apply a bigbang approach of software testing. We consider for each functionality of the software, there will be pure approaches (black- or white-box testing). To be specific, for complicated functionalities (mostly inter-module functionals and implementational functionals), we choose to apply black-box testing; for simple functionalities (mostly mono-module functionals and object reactions), we choose to apply white-box testing. Afterall, we will integrate the modules and test the whole system directly.

The testing will be under following environment:

- Software: Unity (version 2021.3.17f1),

- Hardware:

We list out the functionalities to be tested:

Database

We test the integrity of the Firebase with Unity using white-box testing, as we should see how Firebase respond to user actions.

User Management

We test the Signup function, Login function and Logout function using mixed-box testing, as we should see how the Login function and Signup function integrate with database.

Application

Non-gameplay items

The main window should be displayed, and we test menu items' functionality, title screen's functionality, Gameover screen and level choosing, including every buttons in the screen. Every button will be tested using black-box testing.

Image & arithmetic

We test the rendering of images, text and game status using mixed-box testing, as we wish to see the rendering works well with these functionalities.

Player control

We test the keyboard control, basic movement of pacman and enemies, and enemies' AI by mixed-box testing, as we wish to see different implementations yields different results to the game-play experience.

2 TEST CASES