

System and Unit Test Report

Product Name: Tetris X

Team Name: Spirits

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System Test scenarios:

Sprint 1 test

User Story: As a user, I want to play a working Tetris game.

Scenario:

1. start the tetris game app, press left button, current tile will move left one column from current position
2. press right button, current tile will move right one column from current position.
3. press down button, current tile will move down one row from current position.
4. press rotate button, current tile will rotate 90 degrees.

User story: As a user, I want to register a user account and have a database to store my user information including the user name, password and highest score using the Firebase server.

Scenario:

1. start the tetris login and registration app, user can see the login page, press “REGISTER” button, user can see registration page.
2. in registration page, type:
email = (editText) Username_register_page
password = (editText) Password_register_page
3. press “REGISTER NEW ACCOUNT” button

user can see the text "registration success"

then user can see the login page

4. in login page, type

email = (EditText) log_in_page_username

password = (EditText) log_in_page_password

user can see the text "log in success"

then user can see an empty page.

Story point not working

user story: As a user, I want to have an account to view my score and online ranking.

Situation: we cannot complete the game with android studio on time, so we made the game with Unity. We decided to implement this function with android studio after successfully merging the game and login function together.

Sprint 2 test

user story: As a user, I want the game be able to change the speed of falling blocks and make the blocks generate at random locations to increase the difficulty.

Scenario:

1. start the tetris game app, press the "EASY" button, user can enter the easy game mode. User should see the tiles fall at normal speed, from fixed location, and gain normal scores
2. start the tetris game app, press the "NORMAL" button, user can enter the normal game mode. User should see the tiles fall at fast speed, from fixed location, and gain more scores
3. start the tetris game app, press the "HARD" button, user can enter the hard game mode. User should see the tiles fall at very fast speed, from random location, and gain the most scores

User story: As a developer, I want to merge the code together to make a working game on the Android phone.

Scenario:

1. start the tetris app, type

email = (editText) log_in_page_username

password = (editText) log_in_page_password

user can see the text “log in success”

then, user can see the unity start animation

Sprint 3 Test:

User story: As a user, I want to go back to the login page and be able to login with other account.

Scenario:

1. start the Tetris X app, type in the left box under the text log in :

email = (inputField) logname

password = (inputField) logpass

press “login” button

user can see the difficulty selection page

2. select random difficulty, user can enter the game

3. press quit button, user should see the login and registration page, user can login with another account

User story: As a user, I want to play again when the game is over and be able to select other difficulties.

Scenario:

1. When playing the game, after the blocks reach the top, press “↓” button then there will be a “Game Over” hint.
2. Press the “SELECT DIFFICULTY” button to go back to the difficulty selection page.
3. Press the “EASY” button, user can enter the easy game mode. User should see the tiles fall at normal speed, from fixed location, and gain normal scores.
4. Press the “NORMAL” button, user can enter the normal game mode. User should see the tiles fall at fast speed, from fixed location, and gain more scores
5. Press the “HARD” button, user can enter the hard game mode. User should see the tiles fall at very fast speed, from random location, and gain the most scores

User story: As a user, I want to quit the game any time in order to have a better gaming experience.

Scenario:

1. After selecting the difficulty, the game will start.
2. User can see a button “quit” at the bottom of the game page.
3. Press the “quit” button to quit the game at any time.

Story point not working:

user story: As a user, I want the database server to send data back in order to show the online ranking for me

situation: we complete the most part of this function: the game will create a json file that stores user email and score and upload it to firebase database after gameover. It can retrieve the data of top 5

users from database. However we cannot parse the datasnapshot object retrieved from database or convert it to string. Thus the game cannot show the ranking.

Unit Test:

Unit test code and results stored in the Github project Testing folder.

It can be accessed by using the following link:

<https://github.com/jzhao26/Tetris-X-Sprint3/tree/master/Testing>