

WALK THROUGH

November 2018

1 Test Coverage

We did unit test on two of our classes, both of them have 100 percent coverage. One is LeaderBoardFactory(which only contain one function), the other is User. since user employ the database there is a class called usertestable which have all the functions of users without the database.

2 The most important classes of the program

There are several important classes of the App all with different responsibilities. They are mainly divided by three part, User information storage, main game activities for all the games, and the main activity for leaderboard.

User - This class contain all the score, savestate about the user. it is what handle almost everything from getting the score, displaying score to leaderboard, also responsible for loading and saving games.

SlidingTileGameActivity - This is the main activity of the slidingtile games, containing all the logic and basic layout of the SlidingTiles Game.

MemoryMatrixActivity and MemoryMetrixMovong - These two are the mian activitoes of the Memory Matrix Game. MemoryMatrixActivity contains all the logic and basic layout for a normal memory matrix game and MemoryMatrixMoving for the moving memory matrix game.

MainActivity - this is the main activity for the game Feed The Nanu. It contains all the logic and basic layout for the Nanu Game.

LeaderAndroidConroller - this class will get the scores from the database decide where the text on the screen should go and decides what the user sees, without it you see nothing important.

3 Design Pattern

LeaderBoard - Iterator and factory design pattern
and mvc design pattern

MemoryGame - In MemoryGame moving and non moving the iterator design
pattern is used
and mvc design pattern

Nanu Game - Delegate Interfaces. Inheritance and Abstract Superclass. all the
edible items inherit from drop items abstract class and implement edible.

Sliding Tile - Delegate Interfaces

4 Leader Board

Once a game is finished, there would be an option to go to leader board of the finished game. For games like sliding tiles and memory matrix where games have different version, simply swipe right or left to view leader boards of different versions of the game. A menu would show up if user click on the top right corner of the leader board, allowing users to go to leader boards of different games or to start a new game. The leader board would first show user to public leaderboard, allowing users to compare their score to others, since only the top ten score would be display on the public leaderboard, users might not have chance to see their own score on it. However, there is a private leaderboard available for the users. users can access the private leaderboard by clicking the button on the bottom of the screen which said View your leaderboard.

5 Sliding Tiles

sliding tiles games are solvable. It allows users to play the game in different dimensions, all the way from 2 x 2 to 10 x 10. In addition to that sliding tile would ask user to set their game background, so users can customize their game background using an image in their phones' gallery. Users win the games by putting all the number in order or to make a fine image by moving the tiles.

6 Memory Matrix

There are two version of the memory matrix game. One easy version, one hard version. In the easy memory matrix game, some tiles would turn yellow at the beginning of each round, then they would change their color to the color of a

normal tile, to pass the level, the user would have to tap on the tile that was once yellow. As the level increase, the number of tiles position for the user to memorize would increase, and the time of the tiles showing yellow at the beginning of each round would decrease. The hard version of the memory matrix game is similar to the easy one, except this time, all the tile would be moving, and the users would be asked to tap on the correct moving tile to pass the level.

7 Feed The Nanu

In feed the nanu game, there would be food and spider constantly falling from the top of the screen. The name of the frog like creature sitting on the bottom of the screen is Nanu. Users can drag Nanu left or right to move the creature such that he can catches food. Nanu is very week and need to be fed constantly, the health bar displayed on the top left corner of the screen would show that nanu's health decreasing slowly as time pass. When Nanu eat any kind of food, his health would increase, when a spider is eaten, health would be decrease. In addition to that, if Nanu has a coffee, the chewing speed of the nanu would become faster. As a side note, the nanu creature is taken from a game called "cut the rope", and the background and all of the edible items except for the coffee are all from cut the rope.

8 saved games

All three games in the app can be auto-saved, each game would have three game slot to place saved games, once all three game slots are taken, users would be asked to play or delete some of them.