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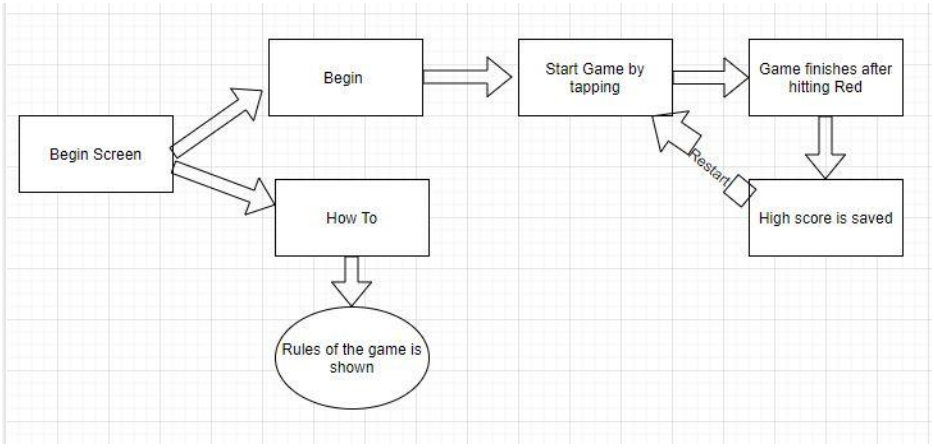
CS443 Final Project

1. Project Statement

I developed a game, the name of the game is called “Pac-Atch”. The user has to control one character, named Pac, by tap and holding the screen. Holding the screen will make the character go up and releasing will make it fall down. Three different types of ghosts (blue, red and pink) will keep coming from the right at different speeds. Blue ghost will give 5 points, Pink will give 10 while Red will end the game. The high score will be saved. My main motivation for making this app is my love for video games and I was always interested in making mobile games. Children, or anyone who wants to pass time by playing mobile games will benefit from this. This game is not really competitive but rather for solo time passing. There probably are many similar applications or games like this since it’s a basic type of game. The user needs to have an android version of at least 1.3.0 in order to play this game.

2. Application Design



The first module of my app is the java where there are four different activities:

The BeginActivity

which triggers the first screen that the users see. This activity includes usage of Intent to call two different activities. One is the MainActivity and the other is the HowTo activity. The HowTo activity is called by using the button on click listener listed under onCreate while the MainActivity is called with another function named beginStart().

The EndActivity

which triggers action after the user hits Red ghost and the game ends. Intents are used again in this activity to call MainActivity so that when user clicks restart, it will start the MainActivity again eventually starting the game. There is also use of Network connection. With the use of getSharedPreferences(), because I needed multiple shared preference files identified by name and they are “DATA_NAME” and “SCORE_HIGH”.

The HowTo activity

which functions the How To function the user sees on the begin screen and shows the rules of the game.

The MainActivity

that controls every other aspect of the game. With the use of Application framework, WindowManager, we set the characters of the game. With the value of setX and setY, the position of the characters are set. To check if the Pac hit any type of ghost, the function CheckingHit() and to position the characters the function Positioning() is created.

3. **Application Implementation and Evaluation**

The MainActivity class which extends AppCompatActivity. The Positioning() function along with CheckingHit() was implemented in this class. This class is the backbone of the game. The BeginActivity class which extends AppCompatActivity. The HowTo class is being called inside this with the use of intent and also the beginStart() function is created in this class. This class controls the very first screen the game will show. The EndActivity class which extends AppCompatActivity uses getIntent to show the score user got last match as well as the high score overall. There is also a reStart function which is used to restart the game and it uses Intent to call the MainActivity.

If the user presses back anytime, except while being in the How To window, the game stops so that's one of the bugs. One error I kept facing is loading the pictures correctly in the game and eventually I was able to solve them by bringing them into a reasonable size.

4. **References**

No references to show.

5. **Experiences and Thoughts**

Making this project was really fun. Because it gave me freedom to choose my own topic and build my own type of application. The homeworks in this class was a little time consuming and challenging but figuring them out made me feel even more successful because of that. I would've added more choices of characters instead of Pac-Man and also different types of ghosts if I had more time. Overall, the class and the professor were really great and helped me learn a lot of things that I will need in my future professions.