

## END OF PROJECT OVERVIEW

### Features

**Currently Included Features:** Adjustable game volume/speed, Weather API interaction, Camera Usage, SQLite, Firebase Login and Registration

**Added Features:** Audio/Microphone usage (Victory Screech)

**Excluded Features:** Tent checks

### Classes Overview

- **SettingsActivity:** Has adjustable volume/difficulty which impacts the music and obstacle speed in GameScreen
- **CharacterSelectScreen:** Shows a list of the different Tent objects, including the option to customize your tent with a picture. Includes the data compression necessary to take the picture.
- **CharacterSelectAdapter:** Adapter that fills the character select screen with tent images and the description of their powers.
- **GameOver:** Displays user's score and writes to the local and global database info about who scored, what the score was, and the character they used.
- **GameScreen:** Screen that actually plays the game. There is logic to track the user movement through touch and to generate obstacles and rewards for the user. Changes background according to current weather in Durham. It keeps track of your tent number and score.
- **GlobalHighScores:** This screen retrieves the top 20 highest scores from Firebase and displays them in a list. If there are fewer than 20 scores, it'll just display all the scores available.
- **GlobalHighScoresAdapter:** This adapter fills in the listview that is used to display the global high scores.
- **LocalHigherScoreAdapter:** This adapter fills in the listview that is used to display the local high scores.
- **LocalHighScores:** This screen retrieves the top 20 highest scores from the currently logged in account from the current device. If there are fewer than 20 scores, it'll display all the scores.
- **LocalScoreContract:** This lists the table name and column names of the local score database.
- **LocalScoreDBHelper:** This class contains the SQL commands used to interact with the local database.
- **LoginActivity:** This activity uses Firebase to allow users to login with their email and password. It will not allow users to proceed if the email and password combination is invalid or not found.
- **MainActivity:** This screen will prompt the user to login or create an account if the user is not already logged in. If they are logged in, the activity will send the user to the Profile activity.

- **Obstacle:** This class represents all of the things that fall down on the screen during gameplay. It represents both the positive and negative things that fall down.
- **PixelHelper:** Class used to convert between pixels and dp in Android.
- **Profile:** This is the home screen when a person signs in. A user can sign out, start a game, or see the settings from here.
- **RegistrationActivity:** This takes care of registration with Firebase. It takes a person's first name, last name, email address, and password
- **SharedPref:** This is a centralized location to use SharedPreferences. It contains static read and write methods for each data type that invoke calls to SharedPreferences.
- **User:** This is used to represent an Object to add to the Global Database for high scores.
- **VictoryScreech:** This is used to record, store, and playback a recording a person makes for when they complete a session of the game.
- **InstructionScreen:** This screen gives the user basic instructions on how to play the game

#### Functionality Overview

- When the application launches and the user is not already not logged in, the user will be prompted to either create an account or login. If the user is already logged in from a previous session, the application will go straight to the profile screen when it launches
- In order to sign-up, a user must provide a valid email address and a sufficiently strong password, as defined by Firebase.
- Once a person signs in they, they will be guided to the profile screen. From here, a person can check high scores, go to the settings page, or start a session of the game.
- If a person checks the high scores, they have the ability to check the global high scores and the high scores on their account from the particular device.
- The settings page will allow the user to adjust the difficulty of the game as well as the volume of the game. There is also the option of going to our group's website
- When the user starts a game, they will be prompted to pick a tent, each with its own power distinct appearance. If a person selects a customizable tent, they can take a picture and use that picture as the tent's appearance. The weather API used will set the background of the game to the appropriate one, depending on the temperature in Durham.
- As the game progresses, objects will begin to fall from the top of the screen, and for each time an object falls, the tent number in the top right will decrement
- The user gains points by hitting good obstacles and will lose points by hitting bad obstacles.
- When the user finishes, their score, character, and name will be written to the local and global database, and their victory screech will be played.