1 “Guess The Song” -

1.1 What is “Guess The Song”?

The aim of the game is for users to guess the song from lyrics they collect by visiting locations on a map, earning them points for guessing the correct song. There will be two modes: Classic and Current. The former will be popular songs from the past 50 years. The latter being songs taken from weekly sales data on the week beginning on the 30th September 2019. All screens, except the map screen, will work without data connectivity.

1.2 Start Screen

The first screen displayed to the user when the application is launched.

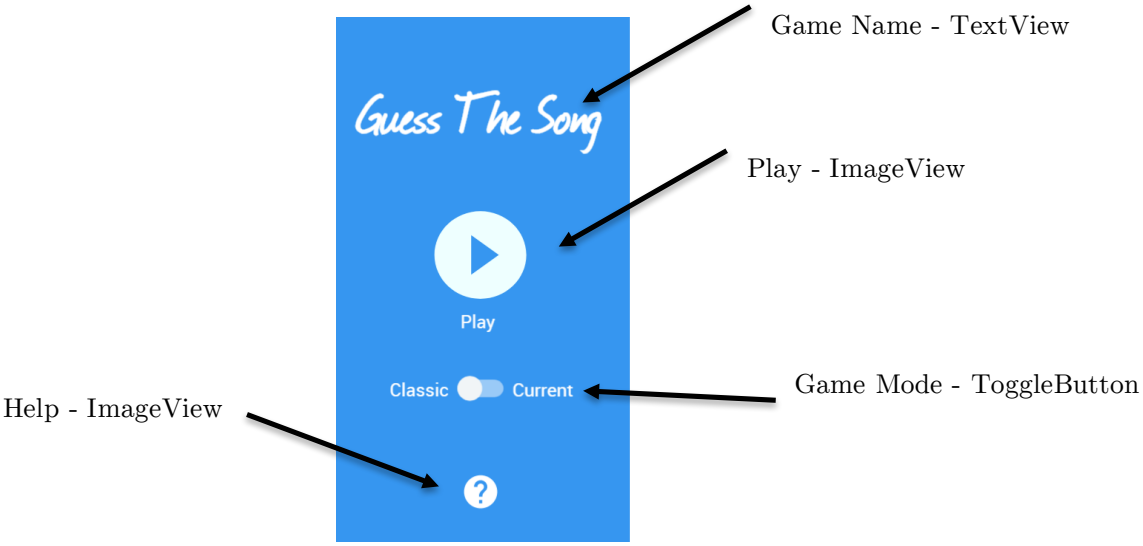

Figure 1

The screen is using a ConstraintLayout with a mixture of elements such as TextView, ImageView and ToggleButton. The user will be able to choose the game mode via a toggle button. Pressing the “Play” ImageView will show the Lyrics screen (Section 1.4), different lyrics depending on the game mode. The “Help” ImageView will present the user with the Rules screens (Section 1.3). The choice of ImageView elements instead of traditional buttons where there to create a more intuitive design.

1.3 Rules Screens

These screens will appear if the user has pressed the "Help" ImageView button on the Start screen (Section 1.2).

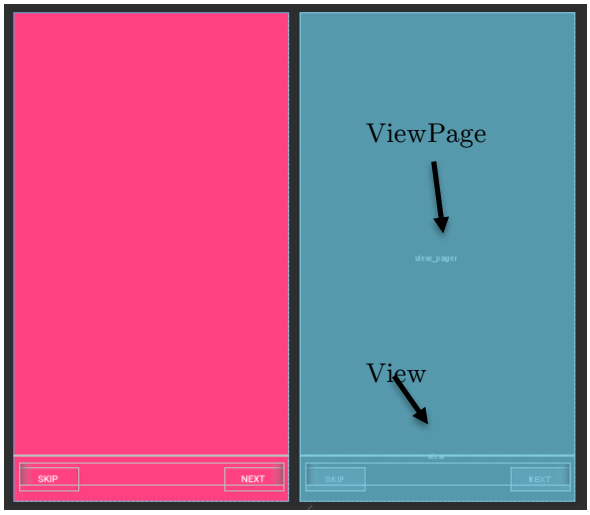

Figure 2

Figure 3

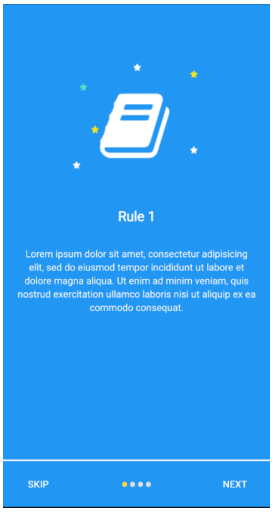

Figure 4

It will then walk the user through the rules showing one rule screen at a time. The main walkthrough (Figure 2) screen consists of a ConstraintLayout with a ViewPager, 2 Buttons, a View and LinearLayout. The ViewPager allows for Horizontal Paging. There will be two buttons: Skip and Next, the former will return the user to the Start Screen (Section 1.2). The latter will display the next slide in the ViewPager until the last slide is reached, where there will only be one button "Let's Go" that will return the player to the Start Screen (Section 1.2). The View draws a white line, the 2 Buttons and LinearLayout are all constraint to the View. The LinearLayout will display the pagination using dots. For the Slides, there will be a ConstraintLayout containing an ImageView and 2 TextViews. Slides were chosen instead of attempting to cramp all the rules on one screen.

1.4 Lyrics Screen (Figure 6)

The Lyrics screen will show the user all the lyrics they have collected, which they have either not attempted yet or incorrectly guessed the song. The lyrics themselves along with their points value will be displayed. BottomNavigationView will allow the user to switch between the screens: Lyrics, Map and Your Songs. The user will also be able to see their stats just above the navigation bar. The activity uses a ConstraintLayout that contains a RecyclerView, ImageView (Returns to Start Screen), LinearLayout (Vertical), 4 TextViews (Three contained within the LinearLayout) and a

BottomNavigationView. Tapping a list item will change activity to the guessing screen (Section 1.5). Once the song for a lyric has been guessed correctly, it will no longer be displayed on the screen, instead, it will be displayed on the "Your Song" screen (Section 1.7). The stats will be updated as well accordingly.

1.5 Guessing Screen (Figure 5)

Once a user has selected lyric to guess, they will be presented with this screen. The user will see the lyric they have selected, the point value of the lyric and how many attempts they have left (Start with 2). A dropdown box with 6 possible choices of songs will be presented, from which they will attempt to select the correct song. Using the "Halve" power, the user can reduce the number of choices in the dropdown box to 3. Using "Point Boost" power will double the point value of the lyric. If the user guesses incorrectly the number of attempts left decreases by one and shown a dialog box/snackbar (Figure 11) informing them of an incorrect guess. If guessed incorrectly again the user will have to collect the lyric again. If guessed correctly the user will be presented with a dialog box informing them they have guessed correctly (Figure 10). The screen will be using a ConstraintLayout with numerous TextView's, a Spinner and 3 ImageViews (Return, Halve Power, Point Boost Power). Spinner objects were used to make it easier to guess the song as it makes it a multiple-choice guessing game.

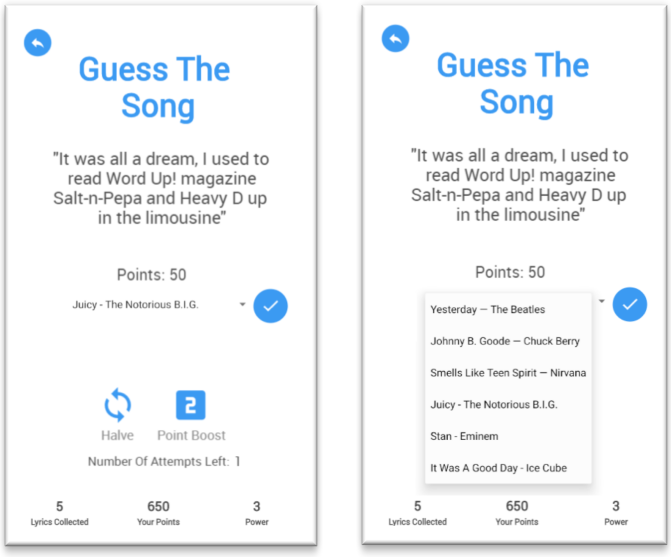

Figure 5

1.6 Map Screen (Figure 7)

The user will be able to see their current location along with the locations of the lyrics that can be collected. They can select a lyric marker on the map and navigate to it using the navigation path drawn on the map once the lyric is selected. Once at the location of a lyric, they will be able to collect it by clicking on the marker again. Once collected, the marker will disappear from the map. The screen will use a ConstraintLayout with a MapView. A custom marker will be used to denote lyrics and the user's location. This is the only screen which will not work without data connectivity.

1.7 Your Songs Screen (Figure 8)

This screen shows the users the songs of the lyrics they have guessed correctly. They will be able to click on a song and be presented with the "Song" screen (Section 1.8) which will display information on the selected song. The screen uses a ConstraintLayout with a RecylerView and numerous TextViews'.

1.8 Song Screen (Figure 9)

Once the user has selected a song from the "Your Songs" screen (Section 1.7) they will be shown on this screen. The screen will show information about the song such as the Artist, Album, Song, Released Date, Genre, Length. The screen uses a ConstraintLayout with numerous TextViews' and an ImageView.

Figure 6

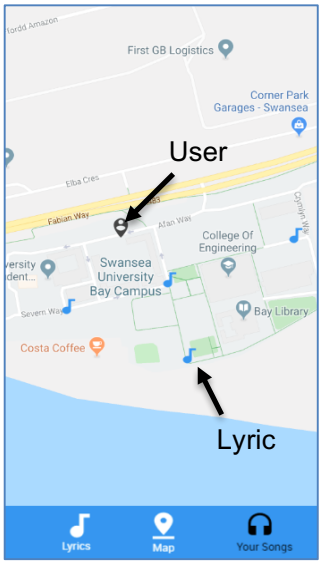

Figure 7

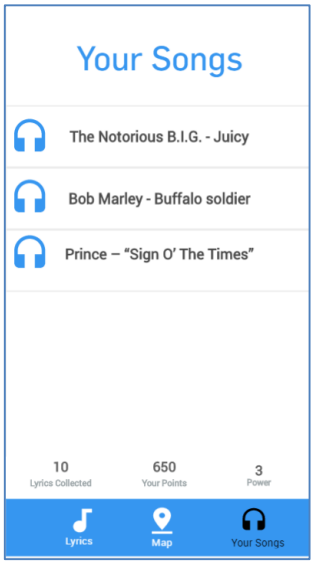

Figure 8

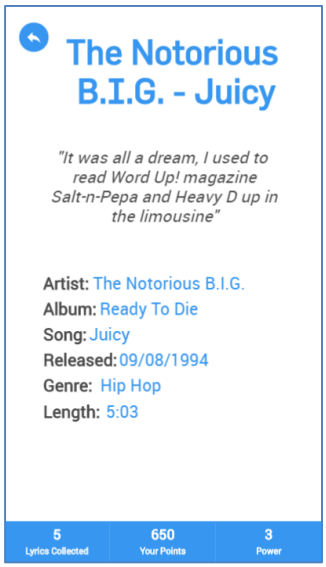

Figure 9

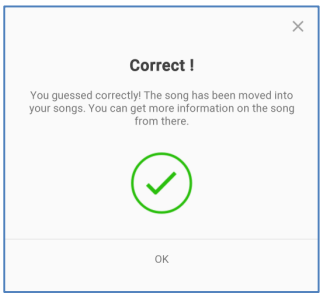

Figure 10

Figure 11

2 Bonus Features

There are a few bonus features that have been implemented in this project. They have been identified below:

2.1 Points System

The points system will provide a way for users of the game to compare their score with others, adding an element of competitive element to the game. Each lyric will have a default value of 50 points, doubling if a point boost is applied (Section 2.2). Possibility of points being used to purchase more "powers" may be implemented.

2.2 Powers (Halve & Point Boost)

There are two types of powers that a user can use: "Halve" and "Points Boost". The former to reduce the number of choices to choose from when attempting to guess a song, going from 6 choices to 3 choices. The latter to double the point value of the lyric. This will help users if they are struggling with a lyric or if they would like more points. They start with a power value of 3, allowing them to use their powers 3 times. They cannot use the power more than once if it has already been applied during a guessing attempt on the lyric. Users can get more powers by getting two correct guesses, which will increase the power value by one.

2.3 Song Information

User will be able to see some information on the songs of the lyrics they have guessed correctly. This is a more trivial feature.

2.4 Multiple Choice

Presenting the user with a choice of songs that the lyric could be from, makes the game slightly easier. It also allows for spelling mistakes not being an issue especially with songs that may be spelt in an unusual way.