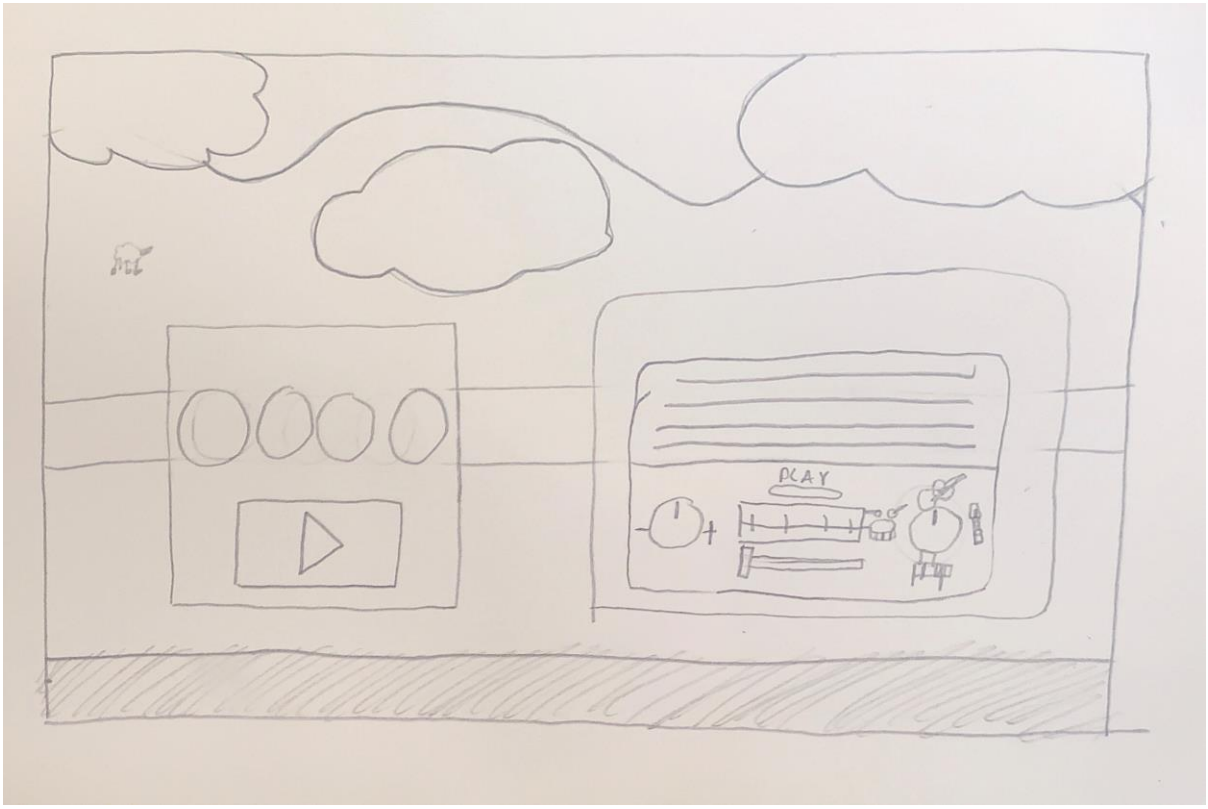
Game Design: Design page



Screen Display

The screen will display the background, radio's position, the board's position, the play sound button's position, the dial's position and rotation on the radio, the slider's position and location on the radio, the radio's play button position, the clouds position and movement and the correct sound indicator's position.

User input

- The user uses the mouse for every interaction in this game.
- When the user clicks on the right dial, the instrument changes to a guitar, flute, piano or drum.
- When the user clicks on the left dial the pitch of the sound increases or decreases.
- When the user presses the play button on the radio, the current sound they have will play.
- When the user presses the play button on the board, a randomized sound plays.

- When the user holds down the mouse to move the slider, the chord of the instrument will change.

<Mouse Right-click> Rotates dials, plays radio, plays random sound.

<Mouse Right-click and Drag> Moves slider

Assets Required

- Radio
- Dial
- Board
- Play button
- Slider
- Play button radio
- Background
- Clouds
- Guitar sounds
- 5 guitar chords
- Flute sounds
- 5 flute chords
- Piano sounds
- 5 piano chords
- Drum sounds
- 5 drum chords

SFML/Code

Setting up art assets (Radio, dials, play radio button, background, board, play button)

Giving the radio, dials, play radio button, background, board and play sound button their sprites and textures and setting them up in their respective functions, radio will be set up in setUpRadio(), the dials will be set up in setUpDials(), etc.

Rotating dials

There should be two rotating dials, I will need to use atan2 to get the rotation to work. I will have a function that will then check what angle the dial is at, this will assign an instrument based on what angle the dial is at.

Rectangle based collision

This collision is needed for the slider so that it doesn't move off its designated position on the line when it is being dragged around the screen.

Moving clouds

There should be a sprite and texture for the clouds, set it to a textureRect, have it set to repeated and move across the screen.

Array of chords

There should be an array of chords for each instrument, this will make it easier to keep track of them and make the code neater and tidier.

Array of chords

There should be an array of instruments, to make the code neater and tidier.

Slider movement

There should be a mouseMove event that will move the slider across its line to change the instrument's chord, depending on the slider's position.

Random sound

There should be a random sound using the various instruments, chords and pitches, which I will assign to the play sound button, so that when it is pressed the assigned random sound will be played.

Correct sounds

When the player gets the sound from the radio to match with the randomly generated sound, the circles on the board will turn green, when this happens a new randomly generated sound will be created and assigned to the play sound button again, when all circles turn green the game is over and the player has won.