'Access Your Rhythm'

A rhythm - based game with a focus on inclusive accessibility measures

Introduction & background

My project involves creating a comprehensive study on Rhythm Games, in combination with inclusive accessibility measures.

My idea is to create a game called 'Access Your Rhythm', a 2D rhythm-based game that appeals to a wide range of demographics, but with a emphasis on accessibility features for those that have have disabilities.

The background behind this ideas is that as a fan of rhythm games, I have admired the ease of access regarding the accessibility of some game in this genre, as these games generally require only one or a few button inputs to progress through the game, and for people with sight or hearing related disabilities, some games generally include both visual and audio input prompts.

Recently however, I have noticed that there is not a lot of releases of these types of quality titles that address the aforementioned accessibility measures. As a result, I want to create a rhythm game that can appeal to, and be played by a wide variety of demographics, including people who may have disabilities.

Core features & motivation

Rhythm Games:

Rhythm-based games are a genre of video game that revolves around a gameplay loop of pressing button inputs to the beat of an audio cue. Many rhythm games include the concept of 'sight seeing', a music term that involves being able to read "compositions that have not been memorized "(Fundamentals of Piano Practice, 2014), which makes rhythm games more satifying to play as it is fun for one to be able to complete stages in stages that they haven't seen before.

These types of game are meant to improve rhythm, while being approachable and accessible to those that have no rhythm.

Accessibility Features:

Popular rhythm game series 'Rhythm Heaven' includes titles that use a limited control scheme of a few buttons, and most parts of the game can be played with solely the sound, or visuals, which allows it to be accessible to those those that are blind, or deaf.

Newer games like Street Fighter 6 and Hi - Fi Rush are among the few that include features that make a game that would otherwise be inaccessible to those with disabilities, accessible.

"2 in 5 disabled gamers have purchased games they haven't been able to play due to poor accessibility" (Scope, n.d.)

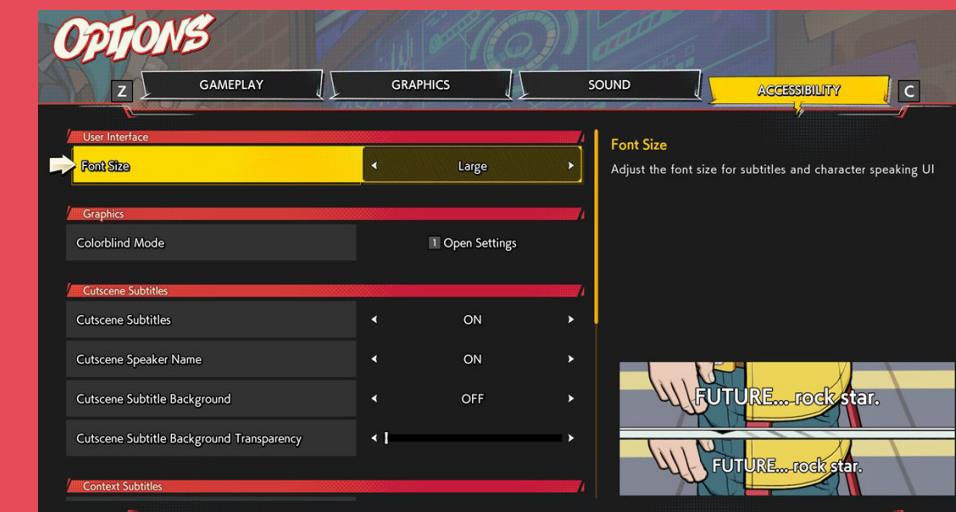Figure 1– A screenshot of the accessibility options in 'Street Fighter 6' taken by myself..

Figure 2 – A screenshot of the accessibility options in 'Hi-Fi Rush' taken by myself.

Methodology

As the game requires a lot of moving parts to work together in sync, I believe the agile methodology will be the best model to use for developing this game.

Technical Features

Rhythm games need to include sound effects to highlight inputs in gameplay. To do this, DAW, or 'Digital Audio Workstations' need to be used to produce and export media files.

DAW's include 'Garageband' for Mac/IOS, 'FL Studio' and 'Cakewalk by Bandlab'.

The main technical features that need to be included is a tool to sync the visuals to the audio. Both Unreal and Unity Engines have in - built tools and purchasable plugins for this.

Figure 4 – An image of the IOS icon for DAW 'Garageband' (Apple, 2024)

Figure 5 – An image of Unity and Unreal Engine (Aladdin, 2023)

Ethics

The nature of this game is to be accessible to the most amount of people, in doing this, the game shouldn't include features that could render it unplayable to those with disabilites, such as strobe effects that affect people with epilepsy, As well as this, there shouldn't be any content that could negatively affect the user, such as the glorification of harm, or descrimniation.

References

Aladdin. J (2023). Unity or Unreal Engine? [Image]. Medium. https://medium.com/@Jamal_Aladdin/the-future-of-game-development-unity-or-unreal-engine-a0ea1d6f984d

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Fundamentals of Piano Practice. (2014). Sight Reading. https://fundamentals-of-piano-practice.readthedocs.io/chapter1/ch1_topics/III.11.html

IGN. (2012). Rhythm Paradise Wii [Box Art]. https://www.ign.com/articles/2012/02/07/rhythm-heaven-fever-review

Scope. (n.d.). Accessibility in gaming report. https://www.scope.org.uk/campaigns/research-policy/accessibility-in-gaming

Time Plan

8th Jan – 7th Feb	Starting to create the game and writing the report together. Figuring out how to create the core features (syncing up UI and audio in the Unity Engine, sound creation for the game). Start on creating a tech demo.
8th Feb – 7th March	Finish demo, begin working on complete version on all minigames. Have a playable version of the game ready.
8th March – 7th April	Start adding in accessibility features to the game, making sure it can be played with audio/visual only, and can be played with multiple types of controllers.
8th April – 29th April	Finishing of and complete development of the game, submitting the final report, and creating the presentation.
30th April – 17th May	Presentation on a day during this time period.

Initial Ideas

The core concept for 'Access Your Rhythm' is to have a playable game made up of a small number of rhythm minigames. All of these minigames will use the same fundamental principles of accessibility used in the 'Rhythm Heaven' games, the minigames will include music and sound effects, as well as the UI, to guide the inputs for the user, meaning a blind or deaf person can play, as there are input prompts for both. As well as this, the game will should be playable with only one button, and can be played with a variety of input devices, and hopefully additional features such as colorblind options, sound settings, and haptic feedback can be added as well.
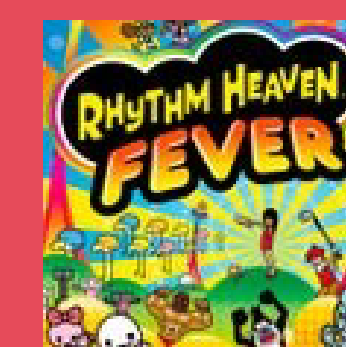

Figure 3 – An image of the poster for rhythm game 'Rhythm Heaven Fever' (IGN, 2012)