

Manic Music



Game Design Document

Introduction to Game Audio & Game Design & Prototyping
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Contents

Overview	3
- Key Features & USPs	3
- Genre	3
- Audience	3
- Platform	3
- Mode	3
- Engine	3
Look & Feel	4
Audio Information	5
The Game	6
- Game Objective	6
- Background	6
Gameplay	6
- Controls	6
- Gameplay Loops	6
- Mechanics	6
- Menus	6
- Story	7
Additional and Ideal Features	7
- Additional Features	7
- Ideal Features	7
Asset Lists	8
- Asset List	8
- Original Audio	12
Project Planning	13
- Milestones	13
- Gantt Chart	14
References	15

Overview

Manic Music is a 2D top-down shooter where the player plays as a guitar pick and must eliminate the wrong musical notes on the guitar and collect the good musical notes. The player not only has visual aids of what a wrong note is, but also audio aids of when a wrong note spawns.

Key Features & USPs

- Save a guitar from an infestation of poorly played notes
- Using audio aids as an indicator for musical notes which have spawned
- An explorable guitar as the playable map

Genre

The game will be a 2D Top-Down Shooter.

Audience

The target audience of the game will be ages seven and over.

Platform

The game will be released on PC.

Mode

Single Player

Engine

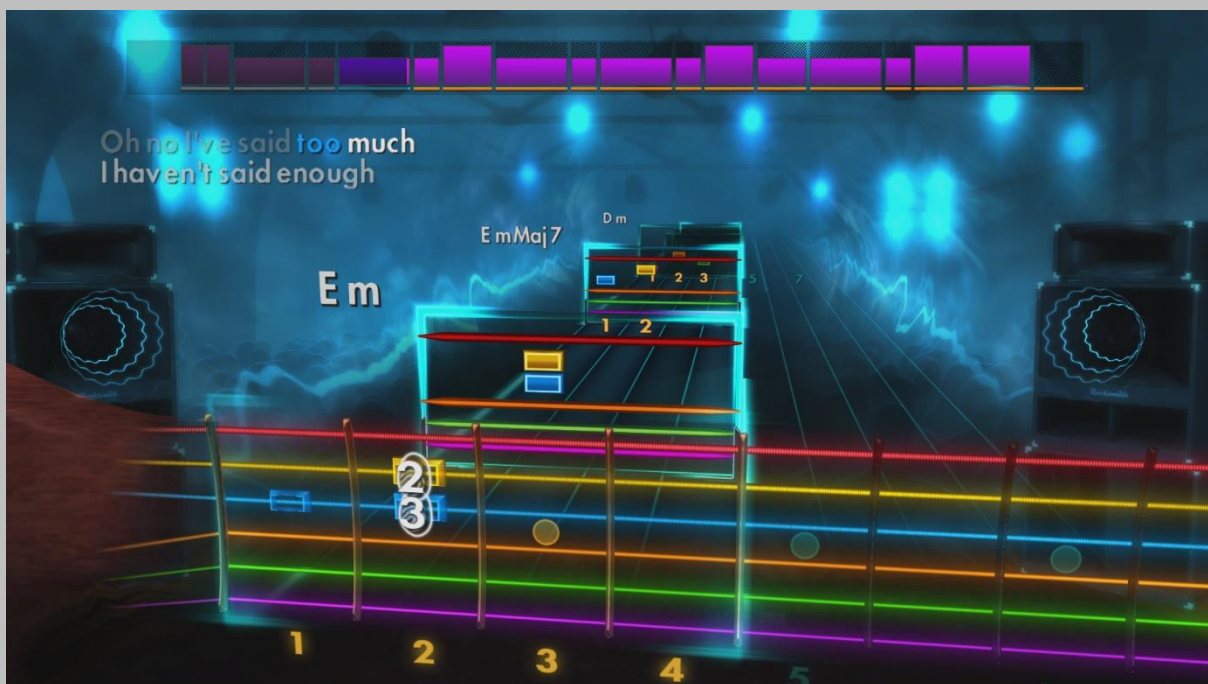
Unity

Look & Feel

The game will have similar visuals and elements to *Guitar Hero III: Legends of Rock* (Neversoft, 2007), *Rocksmith* (Ubisoft, 2011) and *Rock Band* (Harmonix, 2007), as I consider these games to be the main inspirations for Manic Music. As the fretboards of the guitars are visible in these games, Manic Music will share this similar visual element. The feel of the game will be similar to *Hotline Miami* (Dennaton Games, 2012), as the character can move quickly across the playable area, with the enemies also moving towards the player at speed. With *Hotline Miami*, the game will have no similarities to its visual elements, only the playable characters movements.



Guitar Hero III: Legends of Rock (Neversoft, 2007).



Rocksmith (Ubisoft, 2011).



Rock Band (Harmonix, 2007).

Audio Information

Audio Format

Sample Rate 48kHz, 24 bit, .wav

Audio Delivery Format

Stereo FMod Session

The Game

Game Objective

The objective of the game is that the player must collect 25 good notes to win. Whilst eliminating any wrong notes that spawn on the guitar fretboard. As each wrong note spawns, they will move towards the player to eliminate them.

Background

As a guitar and bass player, I came up with the idea of someone playing a song where they are playing the song incorrectly and playing a lot of wrong notes. This is where the idea for Manic Music came from. As the guitar would be infested with wrong notes and the guitar pick must save the guitar from these poorly played notes.

Gameplay

Controls

The player will use the W, A, S, D keys to move the guitar pick around the playable area, and use the left mouse click to shoot the enemies. The mouse will also control which direction the character is looking, as they will need to aim.

Gameplay Loops

The Primary Gameplay Loop will be that the player must move, aim and shoot. Completing the Primary Gameplay Loop will allow the player to advance to the Secondary Gameplay Loop.

The Secondary Gameplay Loop is eliminate, collect, score (The Escapist, 2019). The player will have to eliminate any wrong notes that spawn and try to kill them. Whilst also collecting good notes, which will increase the player's score, thus allowing them to win the game once they have collected 25 good notes.

Mechanics

The player will be allowed to move within the playable space of the guitar, which is the majority of the guitar's body. The player will be able to shoot both types of notes but will suffer a score penalty of -1 for eliminating a good note. On the other hand, eliminating wrong notes will not increase the player's score, as the player will only be able to increase their score by collecting the good notes. If the player is killed by a wrong note, then they will be able to restart the game.

Menus

The game will include two menus. The Main Menu and the How To Play section. Both menus will have a section of the guitar sprite as their backgrounds. The Main Menu will include three buttons. The Play Button, the How To Play Button and the Quit Button. The Play Button will load the main part of the game. Whilst the How To Play Button will load the How To Play menu, and the Quit Button will close the application. The How To Play section will give the player a brief run through on the game's rules and controls. Additionally including how the enemy notes and the good notes will look like, and how many good notes the player will need to collect to win the game. Furthermore, there will be a Back Button, to allow the player to navigate back to the Main Menu from the How To Play section.

Story

The guitar is being played by someone who is not very experienced, and are constantly playing the wrong notes, which do not belong on the guitar. You must eliminate these wrong notes and save the good notes in order to cleanse the guitar from the infestation.

Additional and Ideal Features

Additional Features

Once the prototype of the game has been created, additional features will be implemented, which will allow the player to reach the secondary gameplay loop.

Additional features will include:

- Being able to restart the game
- Incorporation of menus
- Score indicator
- Audio and sprite implementation
- Animation of sprites

Ideal Features

Ideal features will be attempted to be included into the game. However, this will depend on time and the difficulty of each ideal feature. The following ideal features were researched but were either difficult to implement or no time was available to implement them:

- A spawn radius in which the enemy notes cannot spawn around the player
- Background music increasing in speed when the player reaches a certain score
- Audio playing when the player has won the game
- Additional menus when the player is killed or wins the game
- A 2.5D camera perspective
- Walking animation for the playable character
- Particle effects
- Screen shake
- Additional game modes, such as a survival mode
- Additional levels, with different guitars as the background
- Additional soundtracks

Asset Lists

Asset List

Asset Name	Priority	Description
<i>Animations</i>		
enemy_01	Medium	Animates the enemy notes
enemy_02	Medium	Animates the enemy notes
enemy_03	Medium	Animates the enemy notes
enemy_04	Medium	Animates the enemy notes
note_01	Medium	Animates the good notes
note_02	Medium	Animates the good notes
note_03	Medium	Animates the good notes
note_04	Medium	Animates the good notes
<i>Font</i>		
Jazz Music-Bold-Italic SDF	Low	Changes the default font
<i>Hierarchy Objects</i>		
<i>Scene: Manic Music</i>		
Background Music	High	Allows the background music to play
Canvas	High	Allows creation of UI elements
Enemy Spawners	High	Spawning locations for the enemy notes
Game Over Text	High	Shows when the player has lost the game
Guitar	High	The playable area
Invisible Walls	High	Invisible boundaries to keep the players on the playable area
Note Spawner	High	Spawning location for the good notes
Notes Collected Text	High	Informs the player how many notes they have collected
obj_BulletSpawnLocation	High	Spawning location for the bullet prefab
obj_Player	High	The playable character
Restart Game	High	Allows the player to restart the game by pressing 'R'
Spawners	High	Parent object of the Spawners

Win Text	High	Shows when the player has won the game
Wallpaper	Low	A wallpaper behind the guitar
<i>Scene: How to Play</i>		
Back Button	Low	Will take the player back to the Main Menu
Background Music	Low	Allows the background music to play
Canvas	Low	Allows creation of UI elements
Controls Text	Low	Shows the controls of the game
Enemy Note Text	Low	Text explaining what the enemy notes do
Enemy Notes	Low	Example of how the enemy notes look
Good Note Text	Low	Text explaining what the good notes do
Good Notes	Low	Example of how the good notes look
Guitar Background	Low	The guitar background
<i>Scene: Main Menu</i>		
Background Music	Low	Allows the background music to play
Canvas	Low	Allows creation of UI elements
Game Title	Low	The game title
Guitar Background	Low	The guitar background
How to Play Button	Low	Takes the player to the How to Play Section
Play Button	Low	Allows the player to play the game when pressed
Quit Button	Low	Quits the application
<i>Prefabs</i>		
obj_bullet	High	The bullet prefab
obj_enemy_01	High	Enemy prefab
obj_enemy_02	High	Enemy prefab
obj_enemy_03	High	Enemy prefab
obj_enemy_04	High	Enemy prefab
obj_note_01	High	Good note prefab
obj_note_02	High	Good note prefab
obj_note_03	High	Good note prefab
obj_note_04	High	Good note prefab
<i>Scenes</i>		

Manic Music	High	The main game
How To Play	Low	How to Play section
Main Menu	Low	The Main Menu
<i>Scripts</i>		
scr_Bullet	High	Controls the physics of the bullet
scr_CameraFollow	High	Controls the camera movement to the player movement
scr_EnemySpawner	High	Randomises the enemy spawn locations
scr_NoteLife	High	Controls how long the good notes will live for
scr_NoteSpawner	High	Randomises where the good notes will spawn
scr_PlayerAttack	High	Controls how the player can attack
scr_PlayerMovement	High	Controls the player movement
scr_PlayerScore	High	Controls the player score
scr_EnemyAttack	Medium	Controls how the enemy notes can kill the player
scr_EnemyLife	Medium	Controls how long the enemy notes can live for
scr_EnemyMovement	Medium	Controls the enemy movement
scr_GameOver	Medium	Ends the game when the player is killed
scr_Restart	Medium	Allows the player to restart the game at any point
scr_MainMenu	Low	Controls which scenes can be loaded with each button on the Main Menu and How to Play
<i>Sprites</i>		
spr_background	High	The guitar background sprite
spr_enemy_note_01	High	Enemy Note 01 sprite
spr_enemy_note_02	High	Enemy Note 02 sprite
spr_enemy_note_03	High	Enemy Note 03 sprite
spr_enemy_note_04	High	Enemy Note 03 sprite
spr_good_note_01	High	Good Note 01 sprite
spr_good_note_02	High	Good Note 02 sprite
spr_good_note_03	High	Good Note 03 sprite
spr_good_note_04	High	Good Note 04 sprite
spr_bolt	High	The bullet sprite which the player can shoot
spr_player	High	The playable character sprite

spr_enemy_note_01_spritesheet	Medium	Animation spritesheet for Enemy Note 01
spr_enemy_note_02_spritesheet	Medium	Animation spritesheet for Enemy Note 02
spr_enemy_note_03_spritesheet	Medium	Animation spritesheet for Enemy Note 03
spr_enemy_note_04_spritesheet	Medium	Animation spritesheet for Enemy Note 04
spr_good_note_01_spritesheet	Medium	Animation spritesheet for Good Note 01
spr_good_note_02_spritesheet	Medium	Animation spritesheet for Good Note 02
spr_good_note_03_spritesheet	Medium	Animation spritesheet for Good Note 03
spr_good_note_04_spritesheet	Medium	Animation spritesheet for Good Note 04
spr_wallpaper	Low	The wallpaper designed to be behind the guitar background

Original Audio

Asset Name	FMOD Event Name	Source	Play Trigger	Integration Notes
enemy_death.wav	Death	obj_enemy_01-04	Triggers when an enemy is killed	FMOD Studio Event Emitter - Audio indicator when the player has eliminated an enemy note with flanger effect added
enemy_spawn_01.wav	Spawn	obj_enemy_01-04	Triggers when an enemy spawns	FMOD Studio Event Emitter - Multi Instrument - 25% chance of each sound triggering each time an enemy note spawns
enemy_spawn_02.wav	Spawn	obj_enemy_01-04	Triggers when an enemy spawns	
enemy_spawn_03.wav	Spawn	obj_enemy_01-04	Triggers when an enemy spawns	
enemy_spawn_04.wav	Spawn	obj_enemy_01-04	Triggers when an enemy spawns	
title_screen.wav	Title Screen	Background Music	Played when the Main Menu/How to Play section loads	FMOD Studio Event Emitter - Looped track with additional effects
main_riff.wav	Gameplay	Background Music	Starts when main game is loaded	FMOD Studio Event Emitter - Looped track with effects and intended parameters
win_game.wav	Win Game	Background Music	Triggers when the player wins the game	Triggered through script - Intended to play once the player has won the game
note_spawn_01.wav	Collect	obj_note_01-04	Triggers when a note is collected	Triggered through script - Multi Instrument - 50% chance of each sound triggering each time a good note is collected
note_spawn_02.wav	Collect	obj_note_01-04	Triggers when a note is collected	
note_death.wav	Death	obj_note_01-04	Triggers when a note is eliminated by the player	Triggered through script - Audio aid for when the player eliminates a good note
player_death.wav	Death	obj_Player	Triggers when the player is killed	FMOD Studio Event Emitter - Audio indicator to when the player has lost
player_shoot.wav	Shoot	obj_bullet	Triggers when the player shoots	FMOD Studio Event Emitter - Pitch shifted and flanger effect added

Project Planning Milestones

Task	Date Completed	Additional Notes
Original Game Idea Creation	07/12/2021	Deliberation of game ideas
Working Prototype	07/12/2021	Working basic game with simple objects
Asset Implementation	19/12/2021	
Potential Additional Features Implementation	27/12/2021	
Bug Fixing	27/12/2021	
Playtesting	30/12/2021	I will aim for a total of six people to playtest my game
Playtesting Feedback Implementation	31/12/2021	
Polishing of Game	01/01/2022	
Final Game	02/01/2022	
GDD Write Up	09/01/2022	
Submission	10/01/2022	I will aim to submit the project the day before the deadline

References

Dennaton Games (2012) *Hotline Miami* [Video game]. Devolver Digital: Texas. Available online: https://store.steampowered.com/app/219150/Hotline_Miami/ [Accessed 21/12/2021].

Harmonix (2007) *Rock Band* [Video game]. MTV Games: New York.

Neversoft (2007) *Guitar Hero III: Legends of Rock* [Video game]. Activision: California.

The Escapist (2019) *Shooter Loopy | Yahtzee's Dev Diary* [Video]. Available online: https://www.youtube.com/watch?v=yh26jd9UqRw&t=347s&ab_channel=TheEscapist [Accessed 21/12/2021].

Ubisoft (2011) *Rocksmith* [Video game]. Ubisoft: California.