GAME DESIGN DOCUMENT

CIS 487

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PROJECT DESCRIPTION

This game design document outlines a 2D side scrolling music game with original characters and original story. There is not currently a title for this game.

VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	Anthony Robinson & Ruoyu Li	10/19/16	Ruoyu Li & Anthony Robinson	10/19/16	Initial Version

1 Characters

This game will have two characters, one being player controlled while the other will be there for telling/laying the foundation of the story.

The player controlled character is Sir Isaac, a great maestro, who is searching for his missing music notes.

The Music Meister, is a rival maestro who has a deep grudge against Isaac, who always seems to be one step better than him.

2   Story

Our story begins with Sir Isaac getting ready to conduct the Grand Orchestra at the Royal palace when suddenly the Music Meister scatters his notes! Isaac can't perform under these conditions because performing incomplete songs before the music loving king is a direct insult to the crown. Isaac must track down the lost music notes but it won't be easy, The Music Meister has created obstacles to stand in your way!

3   Story Progression

The story will begin with explaining to the player the setting and the initial events that lead into gameplay. These events are Sir Isaac preparing for perform for the King and the Music Meister stealing his notes, thus "fracturing" the songs forcing Isaac to reclaim the scattered notes.

4   Gameplay

4.1   Goals

The overall goal of the game is to simply **score as many points as possible** before the game ends. However, to get the max possible points, you need to be able to "fully complete" each song that is missing notes. Getting all the missing notes to a song will grant the player a FC (Full Combo) badge and bonus. A secondary goal would be to complete as many songs as possible with the limited HP, which decreases with misses. Though it is still possible to get points and enter the next song without getting every note to a single song, completing a song without any misses is still important. Remember, you are performing for the king so completing or not completing songs will affect the ending.

4.2   User Skills

- Pressing space bar/left mouse key to avoid obstacles or jump to collect music notes

- Timing jumps/dodges

4.3   Game Mechanics

- **Start**
  The player has initially 20 HP (Health Point). This game will be a side scrolling runner where the player is automatically moved across the world, much like an infinite runner. Obstacles will appear along the player's path that they must avoid in order to not lose HP. Also, musical notes will appear that the player must collect to complete a given song.

- **Songs**
  There will be a maximum of 20 songs (quantity TBD, order pre-set), once a song is over, whether or not it is "completed" (i.e. no misses), another song will start with a faster pace and this process will continue until all songs are over. Points will continuously increase as the game goes on, with score multipliers activating when a player goes a stretch of time without hitting obstacles and missing notes. The multiplier will increase until it hits 2x and will decrease when notes are missed and or obstacles are hit until it reaches the original 1x.

4.4   Items and Power-Ups

There will be music notes to collect as well as obstacles to avoid during the game, and both counts into combos.

- **Musical Notes**
  Collecting notes will keep the background music playing smoothly without noise, and missing any of them will result in a buzz sound generated at that time point, thus disturbing the music.

- **Multiplier**
  Keeping combos will trigger multipliers to grow up beginning from 1.0x: every 10 extra combos increases the multiplier by 0.1x, finally reaching a maximum of 2.0x, and any miss or collision will decrease the multiplier by 0.2x, to a minimum of 1.0x, which is the original multiplier.

- Additionally, each note missing and each collision with obstacles eliminate the player's HP by 1, and every 20 combos recovers the player's HP by 1, while each completion of a song (zero-miss) gives a 5 HP bonus.

4.5   Progression and Challenge

The game proceeds as the player collects musical notes and avoids obstacles, and every tune following its previous one goes faster (whose BPM (beats per minute) increases), with accordingly more jumps/dodges at higher frequencies that corresponds to the music. Hence the game challenges the player's reaction speed and flexibility, meanwhile providing satisfaction for hitting the keyboard following the music and sense of achievement with the accumulation of combos.

4.6 Game Over & Ratings

- The game is over once the player's HP falls to zero, or when all songs are finished.

- **Ratings**
Completing 0 songs – you get executed and the Music Meister gets to be the new maestro (Rating F or FAILED)

  Completing 1 to 3 songs – plain ending, you barely held it together! The king is displeased and you'll have to spend time in the dungeon! In the mean time the Music Meister takes your position (Rating E or Passed)

  Completing 4 to 8 songs – You can do better! The king is moderately pleased but you probably won't get another invitation to the castle to play for him! (Rating D)

  Completing 10 to 15 songs – Good Work! But not good enough! The King is satisfied with your performance but is leaning towards making the Music Meister his royal maestro. (Rating C)

  Completing 15 to 19 songs – Great Job! The King is very pleased with your performance and will like to invite you to play again! And the Music Meister is sentenced to life imprisonment in the dungeons! (Rating B)

  Completing all 20 songs – you get a position in the Royal Court and the Music Meister is sentenced to execution! (Rating A or AMAZING)

5 Art Style

- Pixel characters (whether multiple choices TBD) and game scenes.

- Music goes quicker and tenser one following another.

6 Music & Sounds

- Symphony Orchestra for BGM (background music)

- Buzz sound for misses and collisions

- A short piece of music for Game Over except A and F ratings

- A short note for each combo

- A cheerful congratulation music piece for A (Can be a little bit longer than those of other endings)

- A short piece of sad music for F

7 Technical Description

This is an **offline casual desktop game** on Windows platform, controllable by keyboard and mouse.

8 Aimed Customer Groups

- **Age**
  Ages 10+ (moderate cartoon violence)

- **Game Type**
  Casual & Music Game

- **For Short-Time Game Seekers**

9 Other Ideas

- Different levels can be added, so that initially the BGM goes at different pace in different levels.

- Different Characters and stories can be considered.

- Network-based ranking could be added so that players can compete with their friends.

- Different music combination choices can be added.