Assignment Cover Sheet

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Semester	Two (2)
Module Title	General Games Programming
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Date of Submission	31/08/19

Assigned Task:

Objectives:

- Create a slot machine with a random generator as the mechanic of the outcome

- Use the mouse as an input device

- Use sound for the different events (pulling the trigger, winning, etc.)

Deliverables

- The task developed with the Phaser engine version 2.x or 3 including all related assets

- A document containing a basic description of the project and a reflection of learnings and problems which arose around the task.

The Slot Machine

Phaser 3

For this assignment, I chose to use the most current version of Phaser 3. This section pays reference to the material I utilised to fulfil this assignment.

Phaser 3 Examples

The examples available on the Phaser.io website (phaser.io/examples) were extremely useful in figuring out what would be available to get the features working the intended way. I found that the examples only went so far and the documentation, for me, proved to be confusing. As such, community made tutorials were of much greater relevance.

Phaser 3 Community Tutorials

All tutorials used are referenced in the bibliography listed at the end of this document. I used a combination of those available from the Phaser.io developers themselves and that of the community with material readily available on YouTube.

A special mention has to go out to Luis Zuno whose YouTube series (https://www.youtube.com/playlist?list=PLDyH9Tk5ZdFzEu_izyqgPFtHJJXkc79no) really helped in setting up and understanding the Phaser.io environment.

Assets

The assets for this assignment were either relatively straightforward to locate or non-existent. In this section, I will briefly outline sources used as well which assets were self-made.

Sounds

All sound assets for this assignment were downloaded from freesound.org. All sounds are referenced in full in the bibliography at the conclusion of this document.

Some of the sounds were edited in the Audacity software package because the original clip proved to be too long or not quite what I was going for.

Lever Pull sound – lever-pull one-armed-bandit from Yle Archives, edited by Timbre

Jackpot Sound – slot_payoff by lukaso

Spindles Sound – playing a slot machine by M.Paredes

Background Jazz – Jazzy Vibes #36 – Loop – Smooth Jazz by Tri Tachyon

Graphics

The graphical element for slot machines proved to be fairly difficult to locate. The icons used for the spindles however were freely available from https://opengameart.org/content/slot-machine-resource-pack. From these icons I created a single PNG strip while also including the CGL logo into the machine.

The font was an asset that carried over from a previously completed tutorial as it came prepacked into an XML file that could then be read to write out any line of text required. From another tutorial was the Star icon that has carried over as the visual point for the player to click. The tutorial that these assets were taken from was written by R.Davey and is available here: https://phaser.io/tutorials/making-your-first-phaser-3-game/part1

Finally, the actual machine base, lever sprite sheet, jackpot sprite sheet and spindle rotation animation sprite sheet were all self-created using Photoshop.

Problems during development

Most recently I have been investing time into improving my C# knowledge. As such, returning to JavaScript proved to be more of a hurdle than originally anticipated.

One major issue I had was with Visual Studio as the IntelliSense coupled with JetBrains ReSharper Tool constantly auto corrected my code which would then fail to run. After discussing this issue with my colleagues, I found out it was best to use Visual Studio Code and by following a tutorial, implement a Phaser.io/JavaScript IntelliSense. This helped streamline my own workflow and greatly improved my patience with this assignment (which was wearing thin because of Visual Studio).

Personal Reflection

Overall, I am very happy with the program submitted. I had never heard of Phaser.io prior to this semester or even considered web based games and how they are made. As such, with what I have submitted, I found to be both a challenge as well as interesting. Upon restructuring the frontend for submission, I became very happy with what I have achieved both visually and knowing the code that makes it all work in the backend.

As for personally knowledge, I managed to finally grasp what a Callback actually is and its use, which, incidentally, I have used in the past without fully understanding why.

Please find the completed game with this document included in the ZIP folder. If, for some reason, it isn't there, please defer to this link to the Github Repository to access the game: https://github.com/Youg3/HTML_SlotMachine

The master branch is up to date, though the finished game was developed under the branch: Slot_Machine_3. The other files on the branch are from tutorials as well as other attempts that were not pursued to completion.

Slot Machine Game

This section covers how a player is supposed to interact with the submitted game.

Lever pull

Using the mouse, the player must simply left click on the Star position on the lever.

Auto Win

After a specified amount of lever pulls without a win condition being met, the slot machine will '*pay out'* with a guaranteed win.

First Pull = 99% No Win

Because the spindle 2 moves in opposite direction to spindles 1 and 3, the first lever pull often results in spindle 2 occupying a Y location that can hardly be reached by the other two. This prevents an immediate WIN condition being met apart from the extremely rare occasions.

Final Notes

For a look at the submitted game in action, please follow this YouTube link: https://youtu.be/PUCgrisFjgA

A hosted version of the game, kindly hosted by Jan Maslov, is available at this address: https://maslov.io/slotmachine/

Known Issues

Upon final testing, I found a few issues with the current implementation. The major issue is that the spindles can, on occasion, appear as if they should be aligned but are offset by a small number of pixels. This is not a problem with the code but more a balancing issue which can be addressed through constant refinement of the numbers used.

Bibliography

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