

Course Project – Phaser videogame

CT30A2910 Introduction to Web Programming

Roni Seppälä

Introduction

Out of the three options for the project, I chose the web video game. I chose this, as the two other options were quite close to what we did in the course, and as I have enjoyed challenging myself with web development, I wanted to try something different. Thus, the game was an obvious choice as that is what I had the least experience with.

Product

The game uses Phaser game engine as the base and was thus the main tool in making the game. Other tools used in addition to this are basically just GitHub for version control, Visual Studio Code for coding, paint.net for editing of sprites and craftpix.net for free assets.

The Idea of the game is to be a 2D platformer, where the player controls a sentient machine on its native planet under invasion of alien robots. The game has features like shooting with a mouse, a jetpack activatable if the character is in air, openable doors, collectible money, and others.

The game uses various free to use assets from the internet. These assets are from pages such as pixcraft.art, chosic.com and opengameart.org. Each folder inside the assets folder has assets, and the license of those assets. Files in the parent assets directory are all custom made by me.

Point Suggestion

Here are my point suggestions, based on the project I have done. If the point suggestions require any further explanation, I have provided them at the end of the chapter.

ID	Feature	Suggested points	Maximum Points
1	Well written PDF	3	3
2	The application is responsive and can be used on both Desktop and Mobile	4	4
3	Application works on Firefox, Safari, Edge, and Chrome	3	3
4	The application has a clear directory structure, and everything is organized well	2	2
5	There is a clear plot in the game. It has a start and an end.	3	3
6	User can get their name in the score board	2	3
7	There are more than 1 type of object to collect	2	2
8	There is more than 1 map	3	3

9	Gamer needs to use both keyboard and mouse to meaningfully control the character	3	3
10	Game uses physics	2	2
11	There is music and sound effects	3	3
12	Can be played using touch screen	3	3

Desktop and mobile compatibility

This is regarding point suggestions 2 and 12. The game both runs, can be used, and can be completed on mobile. However, the game is noticeably harder on mobile due to no multitouch. Even as this is the case, all of the mechanics of the game do work on mobile.

Scoreboard User

This is regarding point suggestion 6. The scoreboard functions perfectly and updates as the player gets score, how ever there is no way for the player to change their name. This is why I think that 2 points out of 3 should be given from this.

Keyboard and mouse

This is regarding point suggestion 9. There is meaningful control using both computer and mouse through movement, jumping, jetpacking and shooting. This is even though there is not really any functional use from shooting.

Own points

Here are some of my own point worthy features, their point suggestions, and explanations for them.

Feature	Suggested points	Explanation
Jetpack	1	Adds more variety to movement. Gradually slows the boost after using
Shooting angle	1	The player is only able to shoot to the direction he is facing, otherwise the bullet is redirected to the nearest allowed direction.
The level system is based on a custom tile grid	1	This system would allow an easy to integrate level builder system to be made. (JS row 663 has function <code>initializeLevelToEmpty</code> , which makes the empty levels and row 589 has function <code>loadLevel</code> , which decodes the levels.