January 17th, 2023

Current Trends and Projects in Computer Science

CMSC 495 6383

Group 1 Project Plan

Create a Scifi Themed Video Game with Custom Music, Art, and a Promotional Website

Roles:

Cole Sarno – Web Developer

Colby Snodgrass – Game Developer/Programmer

Sairam Soundararajan – Music Composer, Assistant Web Developer

Joseph Thill – Digital Art, Sound Effects

David Toyloy – Quality Assurance, Assistant Web Developer

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| GROUP 1  Project PLAN |
| **January 17, 2023** |

# Overview

# Project background and description

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|  | *Our goals are to create a 2D shooter arcade-style video game with custom music and sprites and create a website to promote and distribute the game. We decided to create a game that was set in space, scrolled endlessly, and had the aim of getting a high score, similar to arcade games such as Galaga or Space Invaders. For the website, we aimed to model it after the websites of independent game developers, which often have information promoting the game as well as a way for those interested to access the game and play it for themselves.* |

## Project scope

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|  | *Video games can get out of scope quickly so to avoid that we decided to make a 2D space themed shooter game. For the website, we aim to make a website that is clean, easily navigable, and conducive to promoting the game.* |

## High-level requirements

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|  | *For Game Development, the game will be written in C# and for Web Development, the languages Python (specifically utilizing flask), HTML, and CSS will be used. Ideas for the website to implement mobile-compatibility, audio/video players, game embedding, database integration have been proposed as future options and may require the use of other languages such as, but not limited to: SQL and Bootstrap.* |

## Specific exclusions from scope

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| --- | --- |
|  | *Since we are developing the game using Unity, it will be written in C#, meaning that this will exclude any other Object-oriented programming languages from being used during game development. The web server will be set up utilizing Python flask, so there is no need to create a server using other scripting languages such as PHP.*  *Mechanics of the game have been limited in order to keep the scale of the project manageable.* |

## Implementation plan

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|  | *To implement the project, we will work on portions of it and integrate them together. During Phase I, we will work on prototypes for the game and website, as well as working on developing assets such as art and music. During Phase II, we will work on integrating assets into the game and website as well. During Phase III, we will fine tune the game and finalize the website. Throughout the development process, we will test both the game and the website to ensure that they are running smoothly and without error.* |

## High-level timeline/schedule

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| --- | --- |
|  | *The Project Plan will be completed by the end of week 1 on 01/24/2023, the User Guide and Test Plan will be finished by the end of week 2 on 01/24/2023, Phase I will begin on week 5, Phase II will begin on week 6, Phase III begins on week 7, the Final Project will be finished by 03/07/2023.* |

# GROUP MEMBER ROLES

The roles of each member of the group.

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| --- | --- | --- |
| **Name** | **Title** | **Date** |
| Cole Sarno | Web Developer | 01/17/2023 |
| Colby Snodgrass | Game Developer/Programmer | 01/17/2023 |
| Sairam Soundararajan | Music Composer, Assistant/Secondary Web Developer | 01-20-23 |
| Joseph Thill | Digital art, Sound Effects | 01/24/2023 |
| David Toyloy | Quality Assurance, Assistant Web Developer | 01/24/2023 |

# Tasks:

1. Game Programming
   1. Player movement
   2. At least one enemy
   3. Projectiles
2. Website Programming
   1. Lists game features
   2. Showcases game assets
   3. Comment section
3. Audio
   1. Music (At least title and in-game track)
   2. Sound Effects
4. Art
   1. Player tile sheet/sprite
   2. At least one enemy tile sheet/sprite
   3. Background

Group 1 Project Timeline

Start: 01/17/2023 End: 03/07/2023

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| Week | Notes | Mon | Notes | Tue | Notes | Wed | Notes | Thu | Notes | Fri | Sat/Sun |
| Week  1 | Form Groups | JAN 16 | Begin Work on Project Plan | 17 |  | 18 | Discussed Audio/Music needed for project | 19 |  | 20 | 21/22  Weekly Meeting  Setup GitHub Repo |
| Week  2 |  | 23 | Project Plan Deadline | 24 |  | 25 |  | 26 |  | 27 | 28/29  Weekly Meeting |
| Week  3 |  | 30 | -User Guide and Test Plan Deadline  -Peer Review 1 | 31 |  | FEB 1 |  | 2 |  | 3 | 4/5  Weekly Meeting |
| Week  4 |  | 6 | -Designing Website and Game | 7 |  | 8 |  | 9 |  | 10 | 11/12  Weekly Meeting |
| Week  5 |  | 13 | Phase I  -Peer Review 2 | 14 |  | 15 |  | 16 | -Phase I Prototype Testing | 17 | 18/19  Weekly Meeting |
| Week  6 | -Game Prototype-Website Prototype | 20 | Phase II  -Peer Review 3 | 21 |  | 22 |  | 23 | -Phase II Testing | 24 | 25/26  Weekly Meeting |

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| Week  7 | -Add Assets to the Game and Website | 27 | Phase III | 28 |  | MAR 1 |  | 2 | -Phase III testing | 3 | 4/5  Weekly Meeting |
| Week  8 | -Fine Tune Game  -Finalize Website | 6 | Final Report Deadline | 7 |

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# Budget:

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| **Art** | **0** |
| **Audio** | **0** |
| **Web Dev** | **0** |
| **Game Dev** | **0** |
| **Project Management** | **0** |

Since the assets for our game are being made in-house the budget for making the game is zero dollars. All content for the game will be provided by team members or open-source licensed content will be used.

Group Project Discussion Notes (1/22/2023):

* Joe suggested making a Gallaga type game and we all agreed.
* Also decided on making it pixel art as a design choice.
* Sairam and Cole discussed sharing web development.
* David was not present for the meeting however they have experience in Python so they may work well in web development.
* Sairam and Colby discussed music more and sound effects.
* Cole brought up testing the website and game separately, we decided to figure out details during the test planning phase, but David could also fill this role.
* We also discussed incorporating a database using SQL, however we may not have time to implement this.
* Colby will set up the GitHub repository for our assets.
* David agreed to assist with web development and take on the testing phase, completing all our roles for the project.