Milestone 1

**Proposed Level of Achievement:** Project Gemini

**A picture containing chart

Description automatically generated**

**Motivation**

Life is stressful. From deadlines, bills, exams, to assignments, we always find ourselves in a constant rat race of work. However, it wasn’t always like this. Most of us still fondly remember the days of our youth, a simpler time where we weren’t always burdened with some many responsibilities.

The generation we grew up in had access to the many of the early Flash games when the Internet was becoming more popular with the public in the late 90s and early 2000s. A post on Reddit with a picture of Miniclip (website that hosted many Flash games) had over 6000 upvotes with many users nostalgically thinking about their younger days.

So, we thought, in the stifling race of our busy lives, we would like to provide an oasis of a simple game that people may recall, relax, and enjoy.

**Aim**

We hope to create a 2D tower defence game that is simple but fun to play. We aim to release it for PC.

**User Stories**

1. As a player, I would like to be able to clear multiple levels in the game should I play efficiently and correctly.
2. As a player, I would like to be able to have a clear understanding of how the game works and plays without too much hassle. I would like the UI to be simple and clear, providing me with enough information without hand-holding me throughout the game.
3. As a more experienced gamer, I would like to be able to play against a challenging but not impossible AI.
4. As a casual player, I would like to enjoy and appreciate simple art of the character models.

**Scope of Project**

The **AI** provides a decent challenge to the player. There will be different types of enemies, each with a different type of challenge (e.g. fast enemies with low health, slow enemies with high health, etc).

The **Level-Design** are all unique and interesting. They would have different backgrounds to provide some variation for the player. For example, one level could be set in a grassland, while another set in a desert setting. The main changes for each level, apart from the aesthetics, would be the different pathing that the enemies would follow. This will allow for more strategy that the player needs to think when placing their towers.

The **Sound Design** would include the background music for the player, as well as the different sounds that the models make (e.g. Game Over, enemy takes damage, etc).

The **Character Models** are pixel-sprites that will be easily discernible and fun to see. Each enemy and tower will have their own distinctive tower that will separate them from each other.

The **User Interface** will show the important information that must be relayed to the consumer. It will show the total health of the base, the amount of time left, as well as other essential things for the player. It will be simple and easy to use and read.

Features to be completed by the mid of June:

* UI
  + Return to Menu
  + Achievement Menu
  + Level Tracker
* Art
  + First prototype of Character Models
  + First round of Sound Design
  + First 2 Level Designs
* Game
  + Alpha Version of A.I. (e.g. pathing)
  + Code to Return to Menu

Features to be completed by the mid of July:

* Art
  + Last Level Design and Refinement of Level Art
  + Additional Character Models
  + Special Item Design (e.g. health-packs)
* UI
  + Polish and Finalisation
* Game
  + Beta Version and Debugging of A.I.
  + Functional Code Linking Most Systems (Achievements to Game, etc)

**Tech Stack**

* Godot
* Asperite

Diagram

Description automatically generated

**Technical Proof Of Concept**

Concepts:

1) Pathing

2) Self-Designed Sprites and Map Design

3) UI Design

4) Tower Tracking



**Project Log**

Andrew Baruch

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Task | Hours | Remarks |
| 10 May | Meeting with Advisor and Group Meeting | 1 | Initial project ideation |
| 11 May | Github Tutorial | 2 |  |
| 11 May | Asperite and Sprite Tutorial | 2 |  |
| 11-13 May | Godot Engine Tutorial | 4 | Basics to Godot  Intro to GD Script  Building your first 2D game with Godot |
| 12-13 May | Tower Design | 5 | AA, Normal, and bomb tower with 4 directions |
| 13-14 May | Projectile Design | 2 | Normal and bomb projectile with animation |
| 13 – 14 May | Group Meeting | 10 | 1) Finalise theme and name of project  2) Delegated roles |
| 14 – 16 May | Video Editing and Poster Design | 3 |  |
| 17 May | Pathing Tutorial | 2 |  |
| 18 – 19 May | Level 0 Creation | 6 | Created primitive spawning, despawning, and scoring system |
| 20-21 May | HUD Creation | 3 | Created display for health, current wave and money and integrated it to Level 0 |
| 21-24 May | Spawner Testing | 2 | Testing different spawner types and styles. Scrapped in the end due to none working properly. |
| 24 May | Team Meeting | 1 | Zoom |
| 25 May | README edit | 1 |  |
|  |  |  |  |

Alexander Er

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Task | Hours | Remarks |
| 10 May | Meeting with Advisor and Group Meeting | 1 | Initial project ideation |
| 11 – 13 May | Godot Engine Tutorial | 2 |  |
| 13 May | Asperite and Sprite Tutorial | 5 | Designed enemy figures and tanks (eventually discarded) |
| 13 – 14 May | Group Meeting | 10 | 1) Finalise theme and name of project  2) Delegated roles |
| 13 – 14 May | Base and Enemy Sprite Design | 5 |  |
| 14 - 15 May | Video Design | 1.5 |  |
| 16 May | Title Screen v1 | 2.5 |  |
| 18 May | Map Tile v1 | 1 |  |
| 18 May | Github Tutorial | 2 |  |
| 19 May | Pathing Tutorial | 2 |  |
| 20 May | Map v1 | 3 |  |
| 21 – 22 May | README |  |  |
| 23 May | Path Sprite v1 | 3 |  |
| 24 May | Team Meeting | 1 | Zoom |