

Maze Madness

XX.XX.2025

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# Changelog

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| --- | --- | --- |
| **Version** | **Date** | **Changes** |
| 1.0.0 | XX/XX/20XX | Initial Setup |
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# 

# Introduction

In the TDD. Which namespaces (Includes) did you include in your project, What functionality did each namespace provide to your code.

## Rationale

/ What are you trying to accomplish? /

I want to create a game that heavily uses Nav Meshes to navigate a maze, tring to collect many items while surviving other Ai agents. A good reference on the kind of game I would want to create is Pac-Man.

## Background

/ Describe any context that would be needed to understand this document, including any considerations. For example, what is expected? What is the purpose of what your making?

Pac-Man is a arcade game that received large critical acclaim in the 80’s. It’s a game where you have to navigate a maze collecting all the pellets while avoiding the ghosts.

## 

## Terminology

/ If the document uses any special words or terms, list them here. For example, what does Agent mean? What does Area Modifier mean? This section is for terms you will use fill this in after you make your document. /

Nav Mesh – A 2D shape that defines where AI Agents can Navigate on

Agent – A component of the ai that allows them to move along a nav mesh.

Psuedocode – Writing code not in a specific language but sharing the structure.

NavMesh – A kind of mesh that tells an Ai agent where they can or cant navigate.

Mesh – A 3D object within a computer that is made up of faces, edges and vertexes (Points in 3D space.

## Proposed Design

/ Start with a brief, high-level description of the project. The following sections will go into more detail. For example, summarize what it is you are needing to make. /

Firstly, we will have a player Agent that is controlled by following where the player clicked on the screen.

Next, we have an enemy AI Agent that chases the player. If they collide with the player, the scene reloads as the player “Loses”.

Afterward, well have another enemy, but instead of directly chasing the player, It will patrol a small area by following invisible “Targets”, and only start to chase the player if they are close by. Like the wandering enemy, they also restart the scene when collided with.

## Non-Goals

/ non-goals are stretch goals you personally have for the project; this includes anything that isn’t in the brief that you think you need to cover. /

To have an interesting Gameplay loop that makes an enjoyable experience with an engaging aesthetic, including some hand crafted models.

## Software and Hardware Requirements

/ A list of all software being used, their versions and costs, as well as the targeted hardware constraints. Considerations should include what platform are you releasing to? /

|  |  |
| --- | --- |
| CPU | 4 Cores (vCPU) |
| RAM | 16 GB |
| Storage | 100 GB SSD |
| GPU | 1 GB Dedicated GPU Memory |

# System Architecture

## Data types

/ Describe the main data types you will be using and how they work. /

Float – a number with decimals and a high range.

Int – A number without decimals.

Bool – A switch for true or false.

## Interface/API/Namespaces Definitions

/ Describe the various components and libraries you will be using that are inbuilt into unity. For example, GameObject, Image, SceneManagement, UnityEngine…etc. Link the Unity API Manual to show where to find information on those elements. /

### Which namespaces (Includes) did you include in your project?

### What functionality did each namespace provide to your code?

## Risks

/ If there are any risks or unknowns, list them here. Also, if there is additional research to be done, mention that as well. /

## Alternatives

/ If there are other potential solutions which were considered and rejected, list them here, as well as the reason why they were not chosen. /

# Pseudocode

## System Pseudocode

/ Written plan of the code and how you are going to write it in English. This is where you expand from what you were given in the brief. /

# Evaluation

## Reflection

/Provide a self-reflection on your performance. /