

Pathfinding

06.05.2022

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# Changelog

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Changes** |
| 1.0.0 | 06/05/2022 | Initial Setup, specifying document concept and author |
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# Introduction

## Rationale

/ What are you trying to accomplish? What’s wrong with things the way they are now? /

## Background

/ Describe any historical context that would be needed to understand the document, including legacy considerations. /

## Terminology

/ If the document uses any special words or terms, list them here. /

## Non-Goals

/ If there are related problems that you have decided not to address with this design, but which someone might conceivably expect you to solve, then list them here. /

## Proposed Design

/ Start with a brief, high-level description of the solution. The following sections will go into more detail. /

## Software and Hardware Requirements

/ A list of all software being used, their versions and costs, as well as the targeted hardware constraints. /

# Research

* Find 5 major AI jargon of your choice used within the games industry. List and describe the major AI terms.
* Describe what an algorithm is, and how do you use algorithms when programming?
* Define what is a search algorithm and a sorting algorithm.
* What is big O notation?
* Outline the difference between 3 different pathfinding algorithms.
* Describe how object-oriented programming and inheritance could be used to create AI.
* Outline the development process for creating AI strategies for NPCs in a game.

# System Architecture

## Architecture Diagram

/Diagram of the planned system – This is like a mind map or flow chart of what you are going to make or what you need to do/

## Interface/API 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. /

## 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. /

# Sign Off

Name

[Name of appropriate person approving the software]

Role

[Click/tap to select role]

Signature

Date

[Click/tap to select date]

# Testing

## Errors and Buggs

Outline the test classes used. Add rows to table as required.

|  |  |  |  |
| --- | --- | --- | --- |
| **Class Name** | **Description of Error** | **Screenshots of testing** | **Solution** |
| [Name of Class or Object that the error is connected to] | [Description of the error/error message] | [Add and resize relevant screen shots] | [Explain solution/fix to error] |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Evaluation

## Reflection

/Provide a self-reflection on your performance. /