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Pathfinding

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# Task #1: Research

## Find 5 major AI jargon of your choice used within the games industry. List and describe the major AI terms.

/ Answer the question here in this header /

## Describe what an algorithm is, and how do you use algorithms when programming? Define what is a search algorithm and a sorting algorithm.

/ Answer the question here in this header /

## What is big O notation?

/ Answer the question here in this header /

## Outline the difference between 3 different pathfinding algorithms.

/ Answer the question here in this header /

## Describe how object-oriented programming and inheritance could be used to create AI.

/ Answer the question here in this header /

## Outline the development process for creating AI strategies for NPCs in a game.

/ Answer the question here in this header /

# Task #2: Design your pathfinding project

## Create a TDD(Technical Design Document) describing the design of your project. Your project needs to contain the following:

## • Pathfinding between different waypoints within a maze.

## • At least 3 agent types running in different directions and different waypoints.

## • A changing maze with doors that open and close automatically changing the path between points.

## • Different area modifiers that will affect different agents and their pathfinding.

## • A gap between two different points on the map requiring a link (nav mesh link)

## • There needs to be two types of “collectables” that the AI must grab in order to complete the maze, using a state machine to change whether it is attempting to continue through the maze or going to collect something. Examples of collectables are:

## o A key to some sort of door

## o Some sort of coins/treasure

/ Answer the question here in this header /