

VGP236 Programming for Game Engines

Assignment 4

Twisted Stealth Game!

Estimated hours: 4 hours per milestone

Assignment Goals:

- Understand how AI pathfinding works, and how Unity handles the pathfinding functionality for 3D games.
- Design and Develop functionalities on how AI can change different behaviours and states based on the conditions that happen.
- Create basic intelligent AI that can adapt to certain situations

Assignment Overview

You are working with your team to showcase a prototype involving a **First/Third Person Stealth game**. You are responsible for coming up with a prototype that will demonstrate the gameplay as well as the AI Movement.

The theme and characters you'd like for your Stealth game is up to you. However, **your game is required to have the following:**

- Goal: Player must reach an exit or goal point without getting touched by an enemy.
- Lose Condition: If you get touched by the enemy, the game is over.
- Different types of AI
 - An AI that chases after the player no matter where they go.
 - An AI that wanders into random points in the map, with no care in the world.
 - An AI that patrols around an area but starts chasing after the player when they enter a certain bounding box/radius. They will stop chasing the player when the distance is far away.
- One additional twist to the Stealth game genre. Be creative!

For above and beyond requirements, please check the Marks Breakdown section.

Assignment Hand-in

- **Unity Project ZIP FILE (.zip)** and Uploaded to Omnivox. Any other compression format not accepted.
 - If over 200MB, please submit through Github Link or Google Drive, AND indicate in Omnivox the link.

Requirements

- Player can win/lose the game
- Basic patrolling AI implemented.
- Level mocked up
- Basic chasing AI implemented
- Patrolling + Chasing AI implemented
- Gameplay twist implemented
- Bug-free and polished game

Marks Breakdown

#	Criteria	Mark	Total
1	Game is fully functional and fully playable from start to end.		15
2	The level design is engaging and consistent and helps reinforce the game's theme and gameplay twist.		10
3	Chasing AI implemented		10
4	Wandering AI implemented		10
5	Patrol+Chase AI implemented with functional changing states		20
6	Gameplay Twist (functionality and design)		20
Above and Beyond			
B1	Some level of polish provided on the levels, not just simply using primitive objects.		15
Penalties			
	Bad Scripting Practices (depending on severity) Miscellaneous bugs not related to criteria above (depending on severity)		
Total			100