

### ASSESSMENT AND INTERNAL VERIFICATION FRONT SHEET (Individual Criteria)

Course Title	BSc. Multimedia Software Development	Lecturer Name & Surname	David Deguara
Unit Number & Title	ITMSD-506-1604 – Soft Computing for Games		
Assignment Number, Title / Type	Designing and developing an AI-augmented game (Home-Based Assignment)		
Date Set	22 <sup>nd</sup> November 2022	Deadline Date	Deadlines listed in document.
Student Name	Mikael Zammit	ID Number	0003403L
		Class / Group	MSD6.2B

Assessment Criteria	Maximum Mark
<i>KU 1.2 - Describe AI Authoring.</i>	5
<i>AA 2.1 - Produce a storyboard for a game or multimedia.</i>	7
<i>AA 2.2 - Produce evidence supporting the choices made in the development of the game or multimedia.</i>	7
<i>AA 4.2 Compare codes developed autonomously with the industry standard artificial intelligence tools available.</i>	7
<i>KU 1.4 Outline the goal-driven autonomy.</i>	5
<i>KU 1.5 Describe the uses of Monte-Carlo Search Tree for strategy games and the use of combat artificial intelligence in FPS games.</i>	5
<i>KU 4.1 Describe available readymade artificial solutions.</i>	5
<i>KU 4.3 Identify and utilise readymade artificial intelligence tools already available.</i>	5
<i>AA 3.1 Produce an augmented game and/or multimedia.</i>	7
<i>SE 2.3 Evaluate the choices made within the storyboard in the development of the game or multimedia.</i>	10
<i>SE 3.4 Evaluate and justify techniques used and the final outcome.</i>	10
<i>KU 1.1 Describe crowd simulation using Swarm Intelligence.</i>	5
<i>KU 1.3 Describe the uses of pathfinding in games and navmesh agents.</i>	5
<i>AA 3.2 Prepare a final presentation to showcase the game or multimedia.</i>	7
<i>SE 3.3 Explain the soft computing and artificial intelligence techniques used.</i>	10
<b>Total Mark</b>	<b>100</b>

## **Game Report Evaluation**

During this period of game development, I have evaluated myself as an improved game developer by learning new concepts, including AI integration in a game, animations, and code. Overall, I'm pleased with the tightness I had. Let's see what the game testers have to say. as demonstrated by the provided results. The response has been mixed, but I believe it is more optimistic. If I had to sum up my results, I would conclude that testers liked the game's design/UI and that it fit perfectly with the game's theme, which is monsters. I received suggestions for future advancements to the game. For example, a danger bar, where the bar slider tends to increase as the enemy approaches. I had a mix of testers who found the game easy and some who found it difficult as it progressed through the difficulty settings, but the good news is that the player can choose the difficulty. Also, a small number of testers would pay between €1 and €3 to play the game, whereas others would not.

If you responded Hard, What would you change to balance it a bit

4 responses

- I felt the different difficulties in each level, but I beaten it comfortably
- I Would Reduce Number of Enemies or Set different timer times
- Was not hard
- I would not change any thing, challenge is what make the game addicting

What cool features should be added this game

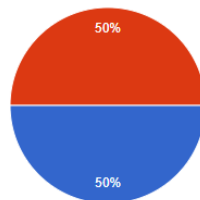
4 responses

- I would add a danger bar, that when enemies are closer too the player the danger bar slider goes up
- Objectives so the player will be guided
- Storyline
- Different kind of enemies (Monsters)

If you where to buy the game what price you pay?

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4 responses

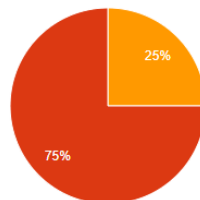


- I would not buy it only for free
- I will be willing to pay between €1 to €3
- I will be willing to pay between €3 to €6
- I will be willing to pay between €10+

Your Opinion on the Game Design & Theme

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4 responses



- Very Bad, Design & out of theme
- Very Good, Design & Fit perfectly with the theme
- Fits with theme, but overall design needs improvement

### What do you think of a Survival Game (like this)

4 responses

I like survival Games and how you implemented is very basic, but nice & cool

Not specifically my type but I like it

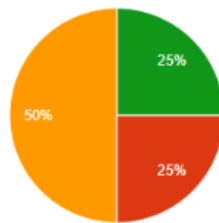
I like survival games, and this one is very good, but it is a short game, there is no actual story behind it

Really Nice game, I had fun playing it and very challenging

### Was the Game Hard for you?

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4 responses



- Yes
- No
- No, But I sweated a lot to beat it
- Yes, Very Hard

4 responses



Accepting responses ☒

Summary

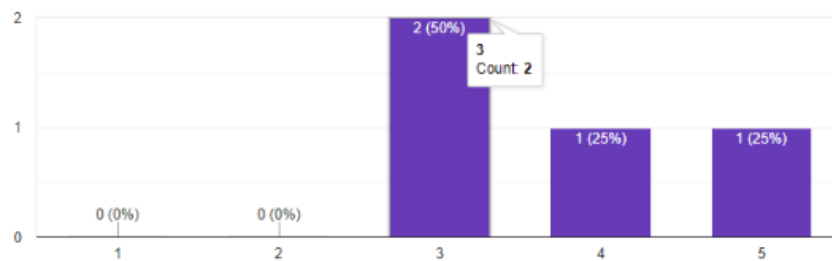
Question

Individual

### Rate the Game

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4 responses



## SWOT Analysis

The strengths that I had according to the results are the AI implementation, the way the monster's approach the player, the AI mesh navigation around the map, and the animations that infuse a more realistic perspective to the game. I was also capable of doing a neat and thematic UI design, including titles, buttons, display metrics, and the monster's health bar, which is very unique. In regards to the weaknesses I had when I tried to make the game stand out, I kept it simple because of the tightness I had during the period I did my assignment. I felt weaknesses when I was programming certain functionalities, like the damage and the scoring using the hit points of the monsters. In this project, I had the opportunity to learn more about how a game is developed using AI and the various games that you can implement with different types of AI. In my case, I only used A\* and Crowd simulation, but this gives me an opportunity to broaden my knowledge on AI in 3D Games. The Threat I have in my game is that it can be very limited. If the player wants to, he can stay at the spawn point and kill the monster without moving, because the monster needs to be triggered by distance to chase the player, so if the player does not move the player can shoot from the same spot and end up killing all or some monsters without even moving. That would be a threat to a boring game.