

Computer Games Development

Project Report

Year IV

[Student Name]

[Student Number]

[Date of Submission]

[Declaration form to be attached]

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# Acknowledgements

I would like to thank the following people who assisted in completing this project including;

John Doe of ACME who kindly agreed to …

I would also like to thank ICME for use of ….

Use this template when writing your research report. As a rule of thumb, the report should be of the order of 10 pages (about 250 words/page).

# Project Abstract

Replace this text with an appropriate Project Abstract.

This section should introduce the problem domain and clearly identify, justify and explain the solution(s) chosen. Care should be taken to ensure that the summary clearly demonstrates the writer’s expert understanding of the problem domain.

# Project Introduction

Replace this text with an appropriate Project Introduction.

Present relevant background or contextual material and define any terms or concepts when necessary.

Here you present to the audience what you are doing and why it is important. In essence, please provide an introduction to the project, why was it chosen, the potential impact of this research. You should state a research question (if any) and present the project objectives. This will most likely be a concrete question probably from one specific area, such as AI, Networking, Graphics etc.

E.g., Research Question Example (Networking): What is the effect of threshold size in the dead reckoning approach on player performance and player experience?

The project that I have chosen to do this year as the main is a project that will have a dungeon procedural generation system that will be the focus of the project. The reason for this choice is due to an interest to learn these systems and create a game that utilises a procedural generation system

The game will be designed like the original Legend of Zelda and will be based on a map that the players can explore. The overworld will be the main world that the players can explore and there will be enemies here along with a town where the players can buy better gear and upgrades. This map will use a tile map to generate the world and will also have different terrains with this map.

The procedural generation will be used in the creation of dungeons that the player can find in the overworld and then will explore to find the end where a boss might be there for them to fight. The boss could then drop loot that will make the player have different experience as they play more.

The goal is to give an understanding of procedural generation to my self and anyone who may find this report helpful in the area of procedural generation for the different dungeons that can come from such a system.

My hope is to create a cool dungeon system that will be made of different designs. The dungeon will have walls doors and floors that will make up the dungeon and the system will generate a possible layout for these.

My goal is to do research on the procedural generation of tunnels and to learn the best and quickest way to generate the tunnels in the game so as to make a quick and cool system that can generate the tunnels.

# Literature Review

Replace this text with an appropriate Literature Review.

The literature review places your research in context. You aren’t the first person to investigate or research a particular topic. Present a short literature review with the following goals:

* Give the reader a good overview of the key concepts;
* Describe the most relevant work (in your own words) that other people have done in this area;
* Use proper academic writing with references.
* Show how the existing work influenced your project.

# The main goal is to create a procedural generation system within a Legend of Zelda style of game that will generate a dungeon when the player enters the caves / dungeons from the over world.

The goal is to create a system that will have different layouts for the dungeon and each time there will be a different style and layout to the dungeon.

The dungeon will also have loot for the player to use elsewhere in the game and they can also have bosses that the player can fight. These can be unique bosses such as bosses that can be only defeated a certain way.

The dungeon can also be maze like to allow the player to get lost but there could also be a way to create a way to allow the player to keep track of their position and to make it easier to get through the maze.

There is also a state machine to be put in to allow the animation of the character and the different states that the player may be in. These can be walking to attacks that the player can use in the game.

The state machine will also manage the player movement and the different states that the player will have such as if the player attacks an enemy and various others.

# Evaluation and Discussion

Replace this text with Results and Discussion.

Describe the results using diagrams such as graphs etc. as appropriate, and discuss what the results mean.

Example: Results indicate that once the threshold gets over a certain point it significantly reduces player performance and player experience

**Project Milestones**

Replace this text with Project Milestones.

Key project milestone dates and measurement on schedule, was project schedule adhered to, effectively planned for delivery on-time or ahead of schedule if appropriate.

The first mile stone was to make a game will a game loop and at the very least to have a player character that the player can control and move around. Also needed to animate the player and to get some the states for the player in.

This was to be done by the week of the 16 November 2020. The player moves and is animated using a Finite State Machine and the tile map for the overworld has been started.

More was done than what was expected and the tile map code is also nearly done as all it needs is the positions of the tiles and to also add more tiles to the world. At the moment there is only grass, dirt, water but more are to added to the tile map.

The tile map will be generated when the game starts and will only be done once.

The animations and the player movement was the focus at the start and they have a very basic movement but it works for now as the goal was to get the Finite State Machine working and that was achieved.

**Major Technical Achievements**

What are your major technical achievements?

**Project Review**

What went right? What went wrong? What (if anything) is still outstanding/missing (i.e., still left to do)? If starting again, how would you approach this project differently? What advice would you have for someone attempting a similar project in the future? Were your technology choices the right or wrong ones? If you chose the wrong technology, provide justifications for why you think this. What were the implications of your technology choices?

# Conclusions

summarise your work and findings.

**Future Work**

Indicate what might be some next steps to try (if a student next year was going to undertake a project in this area what might be an interesting thing for him/her to examine?).

# References

# Appendices

Replace this text with Appendices.

This might include ethics application and other relevant material e.g. copy of any questionnaires used.