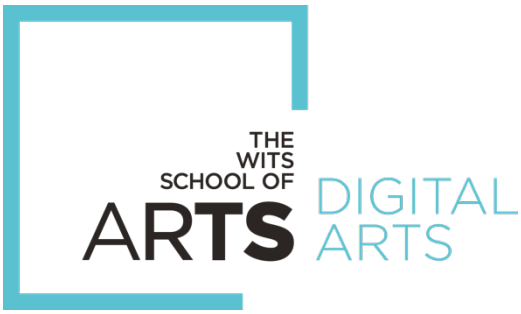

An analysis of my Assignment 1 Micro-Project

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In this essay I will be looking at the specific design decisions that were made when creating my turn-based combat system – with a focus on data design throughout the system. More specifically, I explain my intent and process when creating the project and conclude by reflecting on these choices and what I learnt from the project as a whole.

To start, I look at my intent for the project, which required that we create a turn-based combat system. As such, I made sure that decision making was at the core of my system as it is a vital part of a turn-based system. However, I knew that I wanted to alter the typical structure of a turn-based system as this structure can quickly become repetitive, ultimately resulting in boredom. This led to three main focus points for the project.

First, to break this repetitive nature, I wanted to find a way to manipulate the players turn order. To achieve this I set out to implement a time 'queue' where the current turn is determined by the lowest time of all characters and enemies, with every action being taken adding to the character and enemy's overall time in differing ways, depending on the action. Next, I wanted to incorporate a quick time event into the system. Although this may be seen as taking away from the strategy of a turn-based combat system, I see it as a way to keep the player more engaged in the game. This led to me wanting each attack to have a window of time where players are prompted to press space in order gain an attack damage multiplier, adding another layer to the system, making the gameplay feel less repetitive. However, this would have to be altered once better communication and feedback is implemented so that it relies on attack animations instead, making it more challenging and requiring more engagement. Lastly, as this micro-project was focused on data design, I knew that it was essential to have good data implementation. On top of the data used for the turn order, quick time event, and attack multiplier, I wanted to create a system which was simple on the surface, yet complex when looking more deeply into it. I chose to do this so the system does not intimidate new players, but still offers complexity to those who enjoy complexity. To achieve this I wanted each character, enemy, and action to have data that affect one another in unique ways.

Thereafter, we will look at the process I used to create the system. With every project, I use a Kanban board to manage my progress, breaking down each task into smaller taks order to track all my goals and overall progress. As I am not extremely familiar with turn-based combat systems, my first goal was to research these systems to see both the different ways

they deal with data, and to get inspiration for new and interesting mechanics. Once I finished my research, I started to implement a very basic version of my main intent for the project – a simple player versus player turn-based combat system. This system also included all attacks and actions that the player could make, allowing them to make more meaningful decisions. Although these mechanics served as the foundation for the project, I completed them as quickly as possible as I knew adding additional mechanics would take me longer to implement. Thereafter, my next goal was to implement a more complex system. This would included multi-player, and enemy, battles where the time 'queue' and attack damage multiplier play a bigger part in the overall system and data design. With all systems now in place, my final goal for the project was to finalise the systems data overall. This included finalising the attack formula, refining character and action variables, calculating an attack success indicator, and then balancing them to ensure the system functioned (See Appendix for a detailed data breakdown).

Lastly, I will reflect on the turn-based combat system I created, what I learnt from this process, and the areas I that I could improve in. In order to create this turn-based combat system, I spent a lot of time both researching existing turn-based systems, and the structures behind them. As I had very little experience with existing turn-based combat systems, this process turned out to be more strenuous than previous projects. As a result, I would most likely not create another turn-based combat system in the near future however, the project taught me a lot. First, although I already kept track of my progress with a Kanban board, this project required that I was more detailed and focused with my board, and that is something I will take forward with bigger projects as I usually tended to be more broad. Furthermore, this project allowed me to do more in depth experimenting with state machines, seeing the importance of them in programming and prompting me to think how I can implement them outside of just a turn-based combat system. On top of this, the project also taught me that while so many different systems are important in game design, the data system, and data design in general, is easily forgotten yet crucial, and something I will now pay close attention to in future projects. However, I felt that one area that I could have improved was my attack formula. Although I was happy with the formula I created (See Appendix), I felt that if I had had more time, I could have added more variables to further increased the complexity, meeting my original intent better. Although, I would say that I was able to accomplish everything else that I set out to do, creating a battle system which turned out to be more engaging and not as repetitive as traditional systems started to become, yet still containing an element of data complexity.

Appendix

Attack Formula (Successful Quick Time Event)

((Action Attack Damage + Character Attack Power + Random(-2 & 2)) - Enemy Defence Power) · 1.5

Attack Formula (Unsuccessful Quick Time Event)

((Action Attack Damage + Character Attack Power + Random(-2 & 2)) - Enemy Defence Power)

Table 1

Character and enemy statistics

Statistic	Small Character	Medium Character	Heavy Character	Enemy
Max HP	30	40	55	60
Speed	10	20	30	25
Attack Power	3	5	8	6
Defence Power	2	4	7	5

Table 2

Small Character Move set

Statistic	Quick Move	Standard Move	Heavy Move
Action Speed	10	25	35
Action Damage	5	8	11
Quick Time Event Length	1.2	1.5	1.7
Action Accuracy	80%	100%	65%

Table 3

Medium Character Move set

Statistic	Quick Move	Standard Move	Heavy Move
Action Speed	15	25	40
Action Damage	6	8	13
Quick Time Event Length	1.3	1.5	1.8
Action Accuracy	75%	100%	70%

Table 4

Heavy Character Move set

Statistic	Quick Move	Standard Move	Heavy Move
Action Speed	20	25	55
Action Damage	7	8	17
Quick Time Event Length	1.4	1.5	2.0
Action Accuracy	70%	100%	65%

Table 5

Enemy Character Move set

Statistic	Quick Move	Standard Move
Action Speed	20	30
Action Damage	6	9
Action Accuracy	90%	85%