WSOA3003A: Microproject 1 Analysis

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Demonstration of Intent

The overall goal of this microproject was to communicate data design through turn-based combat. To achieve this, the game would create a system in which both the player and the enemy AI (artificial intelligence) can perform one action per turn. Both the AI and the player would have a set of actions to choose from during their turn. The goal of each action is to either give an advantage to oneself or to disadvantage the opponent, with the intent of winning the game. The goal of the game is to bring the opponent's health stat down to zero.

Demonstration of Process

Version 1: In the initial version, the game included a card drafting state, before the turn-based combat. In the card drafting state, the player would draft *"X"* number of cards from a deck of cards. Each card would have had an action (i.e. Attack/Heal) and a stat value (e.g. 10 Attack) on it. During the player's turn, the player would use the card to either affect their HP (Health Points) or the enemy AI's HP. During the AI's turn, the AI could also either attack or heal. The stat value of the AI's action would have been randomly each turn. In later versions of the microproject, the card drafting mechanic was removed as the mechanic would have needed extensive iteration and playtesting to determine the optimal size of the pool of cards, the optimal number of cards that could be drafted, the optimal number of different types of cards and the optimal stat value of each card.

Version 2: In the early stages of this version the attack and heal action had the same set stat value for both the player and AI's actions. However, it was noted that by making each action stat value the same amount each time, the game becomes less engaging and too predictable. To mitigate this, an enemy RNG (Random number generator) system was created. Each time it was the AI's turn, the action stat value was randomly generated with a range of 0 to 10. Through playtesting and data design manipulation, it was decided that both the player's and AI's action stat value would range from 1-10 and both would have 30 max HP as the optimal values. To replace the card drafting mechanic, a new mechanic was created for the player to interact with the data systems. Each turn the player would have the option to pick one card out of a deck that would have a stat value which they could assign to an action during their turn. Once that card has been picked, it cannot be picked again unless the player chooses to allow the game to randomize and reset the card. By letting the player pick the value of their action stats per turn, their sense of agency increases.

Version 3: At the suggestion of a playtester it was recommended that instead of the enemy determining its' stat value for its actions randomly, both the enemy and the player could pick their values out of the same deck. This would increase the game's tension as both the player and enemy are competing for the same stat values in a deck. Furthermore, the player has to decide whether it is worth rerolling new stat values at the risk of the enemy choosing a higher stat value. The enemy RNG system was reworked so that the enemy would randomly choose which card to pick instead of randomly picking their action stat value. This reworked system proved to be optimal in making players consider the cards they pick during their turn. However, as a result of this mechanic problems arose which made the game feel unbalanced. This issue will be expanded upon in the next section. *Figure 1's* diagram visualizes the different game states and illustrates the game's loop.

Demonstration of Reflection

To make the player feel that choosing a card mattered, once picked, the player could not choose that card again and had to reroll the stats to gain access to all 6 cards again. In addition to this, when the enemy picks a card, the card is blocked off from the player's use. However, the designer could not create a solution that would prevent the enemy AI from choosing already used cards which therefore made the final version of the prototype feel unbalanced. This was because the enemy could access used cards, unlike the player, the game gives a huge advantage to the enemy, as the enemy could potentially use higher valued stat cards multiple times unlike the player. In a future iteration of the game, the enemy AI needs to be reworked to fix this problem and remove the enemy's advantage. In a future iteration of the game, additional actions could be added alongside the "Attack" and "Heal" mechanic such as a potential "Block" mechanic that can only be used "X" amount of times during a game. This mechanic would prevent the opponent from doing any actions on their next turn. This would increase the variety of mechanics in the game and add more strategy and options for the player to utilize in-game. In addition to this, in a future iteration of the game, the UI would be developed further to communicate information to the player better. For example, instead of a card disappearing once it is picked, when a player has picked a card it turns blue and when the enemy has picked a card it turns red to communicate which stat values have been blocked off by whom. Overall, the microproject made developments in its data design, however improvements need to be made in both the game's UI and enemy AI to fully realize certain mechanics and to make the game feel more balanced for the player.

Appendix

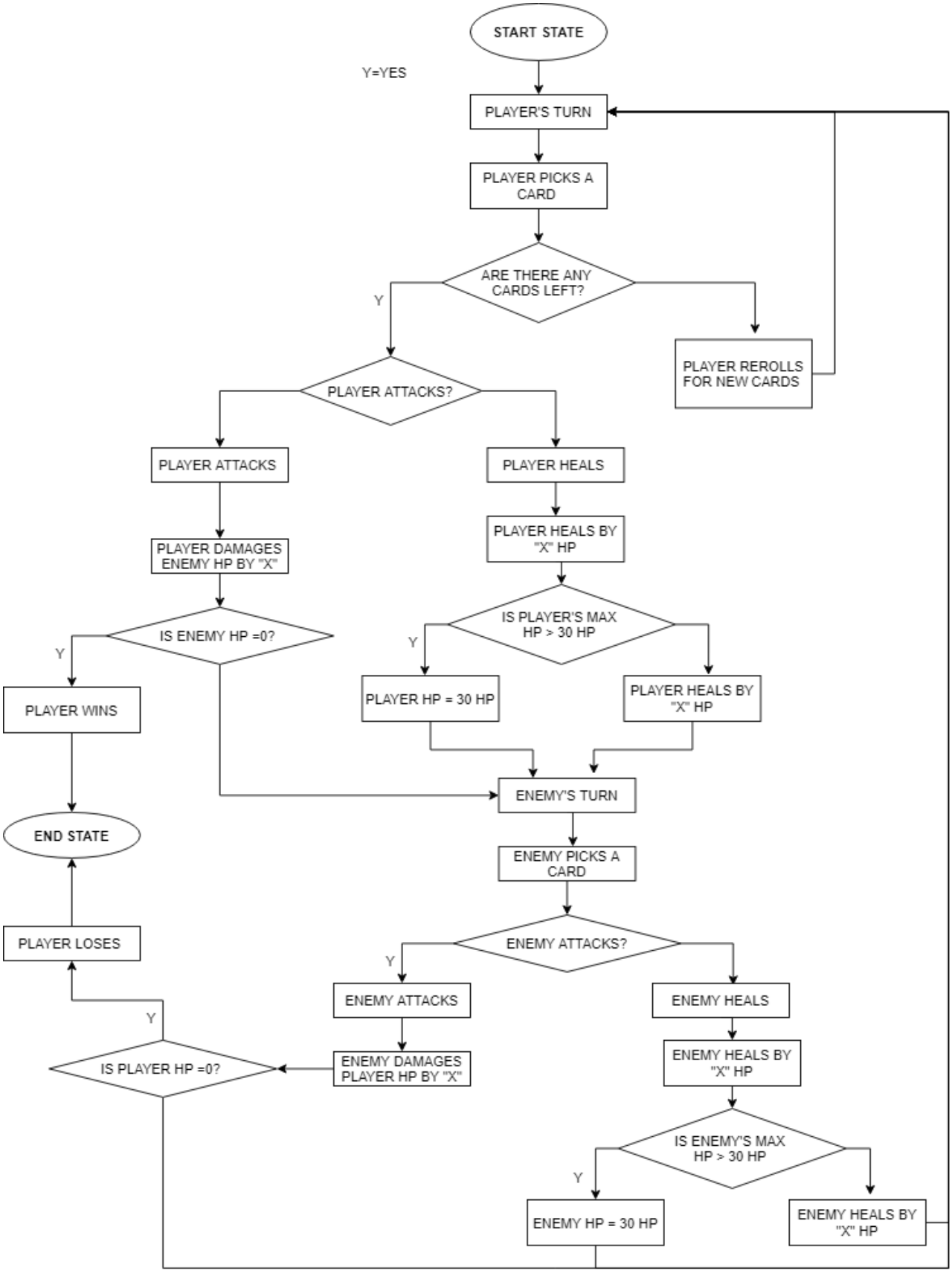

Figure 1: *A flowchart illustrating the microproject's different states and systems through a flow diagram.*