Game Design Document

Combative Delivery

Assignment 1

Turn-Based RPG

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1. Genre and subgenre analysis

Turn-Based game: I want to make a simple turn-based combat system, similar to that of *Pokémon* [1] and the early *Final Fantasy* games [2], where you use base stats, attacks, and items to defeat an enemy. My game will differ from the abovementioned games, since instead of a "party" of allies or Pokémon, it will instead be a single protagonist (more similar to my RPG inspiration).

RPG: I want to make a skill-based character customization system, similar to the S.P.E.C.I.A.L. system in the *Fallout* RPG series [3], but with fewer stats to customise. Another RPG system I would like to add is numerical progression typical of this genre, i.e., a levelling system, where you get XP and eventually go up a level and can improve your character.

2. Hypothesis / Interrogation / Design goal

My Design Goal is to make a game with simple RPG character creation (character stat/attribute selection) and progression mechanics and simple turn-based combat encounters.

I plan to make a simple stat selection screen so that the player can make their character have different strengths and weaknesses. There will be four stats: Dexterity, Strength, Luck and Intimidation. The player can increase or decrease certain stats to improve certain in-game effects or values, such as base damage, critical damage, health regeneration, and enemy-damage reduction. This will give the player more agency when deciding which stats to focus on to make combat easier (or more difficult).

I plan to have simple combat encounters. The player traverses into a trigger (around an enemy in the game world) and the combat screen appears. The player can either attack (influenced by the player's strength and luck stats) or use an item (to heal or deal more damage). Once the player has completed their intended actions, they can end their turn and then), if the enemy is still alive, the enemy will attack the player (influenced by the player's dexterity and intimidation stats. If the player is beaten, they will live, but not gain any XP (which will make reaching the max level impossible). If the player wins, they get XP.

I plan to have a simple levelling system, where after the player has beaten an enemy, they get XP, and when they have enough XP they level up and get a skill point. They can use this skill point in the stat-selection screen to improve one of their stats slightly.

The player's main goal is to reach the end of the map (in terms of the theme, to make a delivery), and a secondary goal of the player is to reach the max level by beating all the enemies on the map.

3. Design notes & process

- While developing my combat system, the easiest state-change method I could think of is an "End Turn" button, similar to turn-based games like *Marvel's Midnight Suns* [4]. It circumvents the need for a complex state machine since the enemy's turn is done by a button's OnClick Event.
- I thought of adding more stats or specific perks to the levelling system and possibly a simple dialogue system, but ultimately, I decided to keep my scope to what I stipulated in my hypothesis.
- The "Dexterity" stat heals the player at the end of each turn and increases the effectiveness of health potions.
- The "Strength" stat increases the player's attack's damage and the damage of the "bomb" item.
- The "Luck" stat contributes to extra random critical damage with a range from 0 to two times the Luck stat.
- The "Intimidation" stat contributes to a random reduction of the enemy's damage with a range from 0 to two times the Intimidation stat.
- These stats form a nice basis of data which the core combat mechanic can use to make each combat encounter, or each playthrough, interesting and slightly different from the ones before.
- The more enemies you defeat, the more damage they do. Their damage increases with a variable called EnemyCount, and this is the basis of the balancing system of the game. This does lead enemies doing a lot of damage if you defeat all the enemies in your path. This growth in enemy damage is why I added a "bomb" item that the player can use to do more damage than usual, in case of emergency. The player only has a limited amount of bombs and must use them wisely. This adds an element of resource management.
- All four of the player's stats start at a value of 2, the player gets 5 extra skill points at the start of the game and each skill has a maximum value of 5, thus the game's max-level would have been Level 8 (since you get one extra skill point per level and you start at Level 1), where all stats would have been at their maximum of 5. However, since enemies' damage scales with the EnemyCount, the game would have been too difficult at these high levels. This is why I've opted not to put enough enemies in the game to allow the player to max out his character's stat. The inability to max out one's character stats (or get all perks) is a common trope in RPG's since it helps with the roll playing aspect of the game. Your character will be good at some things, but not at others. The player can only reach Level 5 in the game, if he defeats all eight of the enemies and thus Level 5 is the max-level-goal for the player.

- I used a spreadsheet to map out the effects of each stat, as well as the enemy damage as it scales with the EnemyCount variable. It was determined that after enemy 7, their damage started to outweigh the maximum potion-healing effect (i.e., 20 HP), which is why there are only eight enemies in the game. If the player opted to fight all eight enemies, the final enemy will be difficult, since healing would be a waste of the player's turn. The only way to reliably beat the final enemy, is to save as many bomb-items for this final fight, since they have the most guaranteed damage output. This adds an extra layer of meaningful decision making for the player, since they need to conserve their resources in order to gain the best outcome.
- The use of incrementing EnemyCount to increase the enemies damage output as a system, works well in the small scope of this game. It helps with a steady increase in difficulty throughout the small game world (with eight enemies) and creates an interesting final fight for the game (it has the perfect difficulty when compared to the other enemies). With the game's small scope, it does not create a system issue, however, if the scope were to increase, another method for enemy scaling would have to be implemented, since if more enemies were to be added, the difficulty would become unmanageable.
- In terms of level design, there are just simple walls that force the player into some of the combat encounters (forces the player to move into an on-trigger-enter event). The player is able to avoid some of the enemies on the map, and this will be pointed out by text boxes. They can choose to focus on the primary goal, i.e., reaching the end of the map (making the delivery) or they can fight every single enemy to reach the max level (Level 5).
- Typical of games in the RPG genre, from start to finish, the player can choose how the flow of the game will work. The player can focus on the main goal and avoid unmercenary conflict, or they can seek out combat and role-play as a more aggressive character.

4. Reflection

I feel that I've achieved my design goal, as I stipulated in the "2. Hypothesis / Interrogation / Design goal" section above, by implementing a simple turn-based combat system, as well as a levelling system and a character attribute customization mechanic.

It was an interesting experience researching the tropes and typical mechanics found in turn-based games and role-playing games, condensing them down to fit the scope of my small game and working out ways to easily or efficiently implement them in my game. This search and focus on conventions and tropes for specific genres was a useful exercise that really helped streamline the planning process. Once I found certain mechanics, that were indicative of the prescribed genres and that I knew I could implement with relative ease, I had clear design goals and I could immediately start working on my game, its systems, its mechanics, and its documentation.

The focus on data and moving data throughout the game to make interesting and diverse (but predictable) outcomes for single inputs was also an interesting experience and a change of pace from previous assignments. While my game has simple data management, and mainly outputs to a text-based console, even the small amount of diversity between combat encounters (or full playthroughs with different player stats) had a major effect on the user experience. It introduced more player-agency (when considering which stats to

improve) and intensity of combat (when a random value, influenced by the player's chosen stats, can lead to a victory or failure).

This was the first Game Design Assignment, where documentation was a substantial part of my workflow, rather than just making a reflection after my game is good enough to submit. The use of an Excel spreadsheet to investigate the effects of stats and data within my game, reduced the need for playtesting to see the effects during run-time and helped me plan out my level design and the player's goals (i.e., the small map with only eight enemies and the max Level 5 secondary goal the player can choose to go for). Unlike other assignments, whenever something of note happened, or I had something interesting to say about my decision-making, I would add another bullet point to the "3. Design notes & process" section. This new workflow really helped me to organize my plan, process, notes and thoughts during the development of my game. I look forward to bettering my data handling, data management and documentation skills further in future projects.

References

[1] The Cave of the Dragonflies, "Battle Mechanics," 2023. [Online]. Available: https://www.dragonflycave.com/mechanics/battle. [Accessed 16 03 2023].

[2] Final Fantasy Wiki, "Battle system," [Online]. Available: https://finalfantasy.fandom.com/wiki/Battle_system#Traditional_turn-based. [Accessed 16 03 2023].

[3] Nukapedia Fallout Wiki, "SPECIAL," [Online]. Available: https://fallout.fandom.com/wiki/SPECIAL. [Accessed 16 03 2023].

[4] C. MCMULLEN, "How Do Combat Mechanics Work in Marvel's Midnight Suns?," The Escapist, 2022. [Online]. Available: https://www.escapistmagazine.com/how-do-combat-mechanics-work-in-marvels-midnight-suns/. [Accessed 17 03 2023].