

# Terms

- The Game: The product described by the following requirements.
- The Computer: A device on which the game runs.
- Player: The person who interacts with the game by providing input via The Computer.
- Player Character: A character in the game, controlled by the Player's input.
- NPC: A character in the game, which the Player Character can interact with, will perform Moves based on the Player's input.
- Enemy: an NPC that is hostile to the Player Character.
- Type: A word assigned to a creature/Player that represents its general topic. A Type is always a single word
- HP: health points
- XP: experience points
- Move: A word used as an action relative to a target or the Player by a lexical relationship: synonym, antonym, or neither.
- Move List: all the Moves that the Player Character or an Enemy is able to use
- Attack Move: A Move intended to reduce opponents' HP.
- Defense Move: A Move intended to buff, shield, cleanse, or help the Player.
- Relation Engine: The subsystem in the game that determines if a Move word is a synonym, an antonym, or neither, relative to the Type of character the Move is applied to.
- Encounter: An interaction between the Player Character and at least one Enemy.
- Turn: An opportunity for the Player Character or an Enemy to use a Move during an Encounter.
- Round: A single loop of turns, one for the Player Character and one for the engaged Enemy.
- Battle: A sequence of Rounds.

# Priorities

- Essential (E): Must be present.
- Desirable (D): Highly wanted.
- Optional (O): Nice to have, but can be dropped.

# Requirements

1. The game shall include a hub world that contains interactable locations. (E)
  - 1.1. The Player Character shall be able to Move in any direction around the hub world. (E)
  - 1.2. The Player shall be able to use the hub world to travel to different game Destinations. (E)

- 1.3. Destinations shall have at least one interaction with the Player Character (E)
  - 1.3.1. Interactions shall be one of, a shop or a Move (E)
  - 1.3.2. Shops shall provide the Player an opportunity to use currency to purchase Moves or items. (E)
  - 1.3.3. The Game shall display active Destination effects in the Player UI. (D)
- 1.4. The hub world shall provide a clear return path to itself from any Destination. (E)
- 1.5. The hub world shall have at least 3 interactable locations.
- 1.6. The Player shall be able to view a map of the hub world. (O)
2. The Player shall engage in turn-based Battles. (E)
  - 2.1. The Battles shall be Encountered by interacting with specific NPCs in the hub world. (E)
  - 2.2. The Battles shall be Encountered by Random Encounter. (E)
  - 2.3. These Battles shall take place between the Player Character and at least one Enemy. (E)
  - 2.4. The Player shall select a Move to perform on each of their turns. (E)
  - 2.5. The Enemy shall select a Move to perform on its turn. (E)
    - 2.5.1. The mechanism to select the Move shall be randomized for enemies. (E)
  - 2.6. A Battle shall be over when either the Player Character runs out of HP or all the enemies run out of HP. (E)
  - 2.7. If a Battle is against multiple Enemies, only one shall fight the Player Character at a time. (E)
    - 2.7.1. Each Enemy shall have its own independent HP pool. (E)
    - 2.7.2. When the current Enemy dies, it shall be replaced by another one that is participating in the Battle. (E)
    - 2.7.3. The current Enemy can use its Move to encourage another Enemy in the Battle to Battle the Player. (O)
  - 2.8. The Player and opponent shall be assigned a Type at the start of a battle. (E)
  - 2.9. The Player shall be able to view their and an opponent's Type during a Battle. (E)
  - 2.10. When the Battle is completed, the Player shall be rewarded with at least one of the following rewards: currency, XP, or Moves. (D)
    - 2.10.1. If the Player receives a Move that they already have, they shall have an opportunity to take a reward in currency. (D)
  - 2.11. The game shall choose a default Move if the Player does not choose a Move within a specified time limit. (O)

3. The game shall allow a Player starting the game for the first time to complete a Battle and navigate the hub world. (E)
  - 3.1. All UI buttons shall have an icon to represent the action. (D)
  - 3.2. All UI text shall have at least a 3:1 contrast ratio with the background. (E)
  - 3.3. All UI text shall be readable on a 13-inch display. (E)
  - 3.4. All UI elements shall follow a consistent colour scheme. (E)
  - 3.5. The Player shall have access to an inventory UI. (E)
    - 3.5.1. The inventory shall include a Move List of the Player Character. (E)
    - 3.5.2. The inventory shall indicate how much currency the Player has. (E)
    - 3.5.3. The inventory shall indicate what Moves the Player knows. (E)
    - 3.5.4. The inventory shall allow the Player to change which Moves are on the Player Character's Move List. (E)
      - 3.5.4.1. The Player Character shall have a limited number of Moves in the Move List. (E)
4. All creatures and the Player Character shall have stats. (E)
  - 4.1. Each creature and the Player Character shall have a total HP. (E)
  - 4.2. Each creature and the Player Character shall have a level. (E)
    - 4.2.1. XP shall increase the Player Character's level upon reaching certain thresholds. (E)
    - 4.2.2. The level shall affect the total HP of each creature and the Player Character. (E)
  - 4.3. Each creature and the Player Character shall have exactly one Type at creation. (E)
5. Each creature and the Player shall have a set of Moves they can use.
6. The Relation Engine shall classify a Move as a synonym, an antonym, or neither relative to a Type of the target of the Move before resolving effects. (E)
  - 6.1. The game shall classify every relation between words as a synonym, an antonym, or neither. (E)
7. The damage of an Attack Move shall depend on the relation between the target's Type and the Move's Type. (E)
  - 7.1. If the Move word is an antonym of the Enemy's Type the attack shall deal high damage, being 1.5 times base damage. If it's a synonym it shall deal normal damage, being base damage. If it's neither it shall deal low damage, being 0.75 times base damage. (E)
  - 7.2. Critical hits shall have a non-zero chance to occur using an Attack Move. (D)
    - 7.2.1. Critical hits shall multiply the post-relation damage by a constant independent of relation. (D)

8. Using a Defense Move, if the Move word is a synonym of the Player's Type, the defense shall be effective. If an antonym, it shall be ineffective. If neither, moderately effective. (E)
9. Defensive dispel Moves shall remove 0, 1, or 2 negative statuses. (D)
10. Defensive Moves shall have a cooldown between uses. (E)
  - 10.1. This cooldown shall be a number of Rounds. (E)
  - 10.2. This cooldown shall reset between Battles. (E)
  - 10.3. If a defensive Move is used before the cooldown is over, the effect of the Move shall be reduced proportionally to the amount of the cooldown elapsed. (D)
11. The Player Character shall acquire new Moves by winning Battles, purchasing them from NPCs, or from finding them in hidden locations. (E)
12. The system shall save and load the current game state. (E)
  - 12.1. The save shall include the Player Type, equipped Moves, known Moves, inventory, visited Destinations, and progression. (E)
13. The game shall produce a log of Player actions. (D)
  - 13.1. The log shall reset every time the game is launched. (D)
  - 13.2. The log shall contain combat outcomes for Battles the Player engaged in. (D)
    - 13.2.1. The log shall contain the relation outcome for every resolved Move for every currently logged Battle. (D)
  - 13.3. The log shall contain a timestamped list of locations the Player entered. (D)
  - 13.4. The log shall contain a timestamped list of NPCs that the Player interacted with. (D)