🟪 RPG Data Management

Documentation Template

Gnome Party
Project 5
Team 4
Sebastian Bolatto, Hritish Duvvur, Zejun Meng, Ayushi Parikh, Omkaar Rege

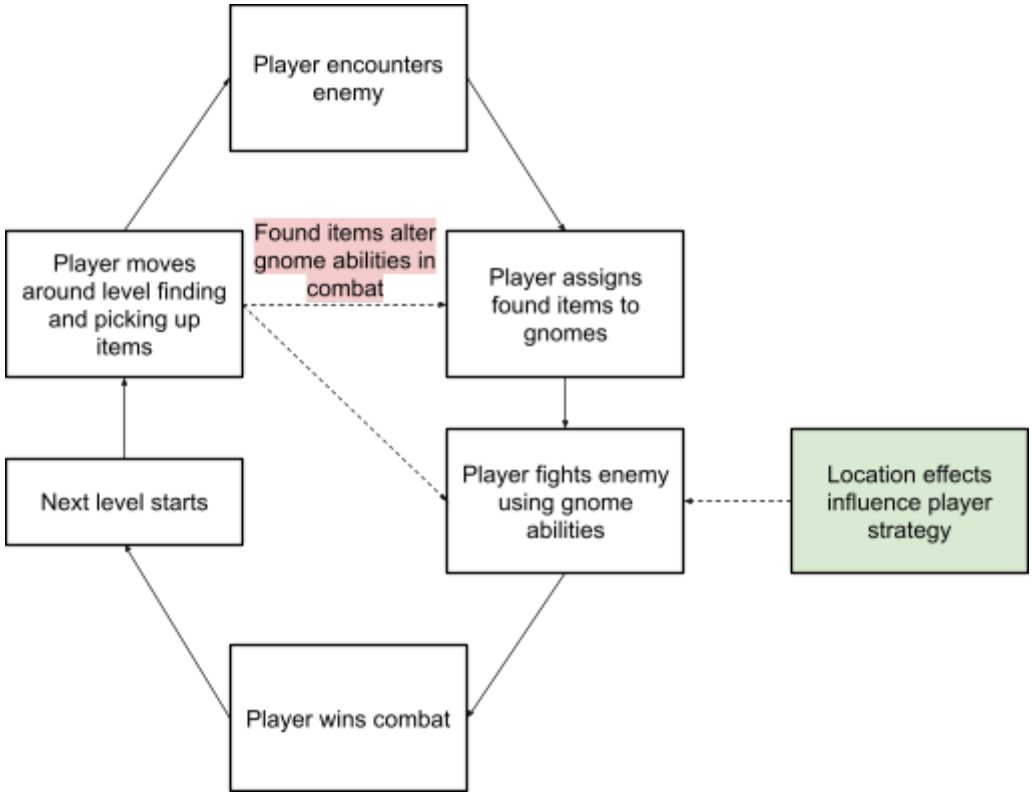
Overview

- **High Concept -** Provide a concise summary of the prototype's vision or concept. What kind of RPG system and gameplay experience were you aiming for?
    - Gnome Party is a short turn-based RPG focused on tactical combat and exploration. The game's primary feature is its unique turn-based combat system, which focuses on managing the movement and positioning of six characters in your party. Enemies attack certain positions, and gnome abilities depend on their positioning. Each gnome in the party also contributes their own special ability, with items serving to augment their abilities.
- **Hypothesis -** What gameplay hypotheses were you exploring? Describe assumptions about player strategy, character progression, or interaction with environments.
    - Our hypothesis was to test if we can create an engaging turn-based combat system with a heavy emphasis on positioning where the player controls the movement of a large party of individual characters.
- **Team Members & Contributions -** List team members, their roles, and key contributions.
    - Sebastian Bolatto
        - Game Designer & Programmer
        - Implemented full combat system
    - Hritish Duvvur
        - Programmer
        - Implemented item inventory and data tracking
    - Zejun Meng
        - Programmer
        - Implemented team and item selected
    - Ayushi Parikh
        - Artist
        - Added gnome and enemy art
    - Omkaar Rege
        - Level Designer
        - Implemented level layouts
- **Tools/Engines -** List the software, engines, and tools used, and explain their selection.

- Unity 2022.3.38f1 - We are using Unity as our game engine, simply because everyone in the group is already familiar with the engine and it would allow us to hit the ground running.
- Trello - used for Task Management, easy to use for rapid production
- Clip Studio Paint - Used to create game art, free and easy to use
- Github - To allow us to share work and make sure everyone has the correct build
- Discord - Communication, free and easy to use

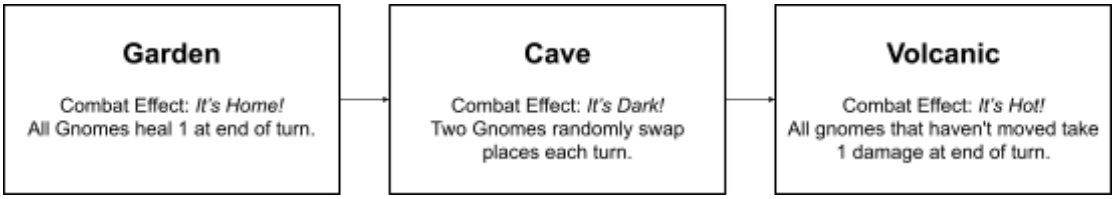
RPG Systems Design

- **Core RPG Features** – Describe the RPG systems you implemented.
  - Gnome Party implements several core RPG systems, including a class-based combat system, unique abilities, inventory and equipment management, and party positioning/movement. Each gnome character belongs to a distinct class (e.g., Thrasher, Slink, Blocker), each equipped with a unique ability. The game also allows the player to explore levels, find and equip items, and customize their gnomes using these items to create unique synergies and playstyles.
- **Player Progression** – Explain how players grow, customize, or adapt their characters over time.
  - Player progression in Gnome Party is driven primarily through item acquisition and familiarization with your party. As players explore game levels, they collect equipment that can boost the player's abilities and significantly alter the synergies of their gnomes and their playstyles.
- **Playstyle Differentiation** – How does the system support distinct strategies or player types?
  - Gnome Party supports varied playstyles primarily through its item system and environment-based modifiers. Each gnome's abilities can be significantly altered depending on the items they equip. For example, adding the dual axes to the healer character will not only cause them to heal an ally when activated, but will also cause them to deal damage to the enemy. The modularity of the items allows players to build hybrid roles or specialize their gnomes in unconventional ways, enabling creative party compositions. Additionally, each game level features a unique special location effect, and these effects force players to reconsider their usual tactics and adapt their composition, assigned items, and strategies to suit the environment.
- **System Interaction Diagram** – Include a visual showing how your RPG systems interact with each other and player input (e.g., items affect stats; traits influence outcomes; player choices unlock abilities).



Environmental Design

- **Systemic Variation** – Describe the 3 environments in your game. How does each one change gameplay?
    - Each environment features a distinct style and feel, and also alters the combat with a unique effect at the end of each turn.
    - Garden
        - Players start in the garden of the gnomes, which is a vibrant green landscape full of foliage and toadstools. In this environment, the player fights against “Mushroom Kid,” which is a sapient mushroom with a sword.
        - In this combat, the player gets the effect, “It’s Home!” which causes each gnome in the party to heal by 1 HP at the end of each turn. This effect supports the player, and helps to ensure the player has a safe space to get used to the combat system, since this is the first enemy the player faces.
    - Cave
        - After their fight with Mushroom Kid, the players enter the deep caves. These caves are dark and full of stalagmites, and feature a slightly maze-like set of branching rooms that the player can explore and collect items from. In this environment, the player fights against the “Killer Bat”!
        - In this combat, the player gets the effect, “It’s Dark!” which swaps the positions of two gnomes in the party at the end of each turn. This effect causes the player to have to think more tactically about their positioning.
    - Volcanic

        - The final area is a small volcanic area deep within the caves, which is the lair of the mole. This area is built to look like a small arena surrounded by lava. In this environment, the player fights against the “Mole,” which is the evil mole that has stolen the Gnome King’s beard!
        - In this combat, the player gets the effect, “It’s Hot!” which damages each gnome that hasn’t moved at the end of each turn. This adds a layer of danger and urgency to this boss fight, and forces the player to be liberal with their use of movement abilities.
- **Impact on Strategy** – What decisions or challenges do these environments introduce?
    - In the combat located in the Garden, the player gets the effect, “It's Home!” which causes each gnome in the party to heal by 1 HP at the end of each turn. This effect supports the player, and helps to ensure the player has a safe space to get used to the combat system, since this is the first enemy the player faces.
    - In the combat located in the Cave, the player gets the effect, “It’s Dark!” which swaps the positions of two gnomes in the party at the end of each turn. This effect causes the player to have to think more tactically about their positioning.
    - In the combat located in the Volcanic area, the player gets the effect, “It’s Hot!” which damages each gnome that hasn’t moved at the end of each turn. This adds a layer of danger and urgency to this boss fight, and forces the player to be liberal with their use of movement abilities.
- **Environment Design Map or Chart** – Include a diagram or level flow to illustrate systemic differences.
    - 

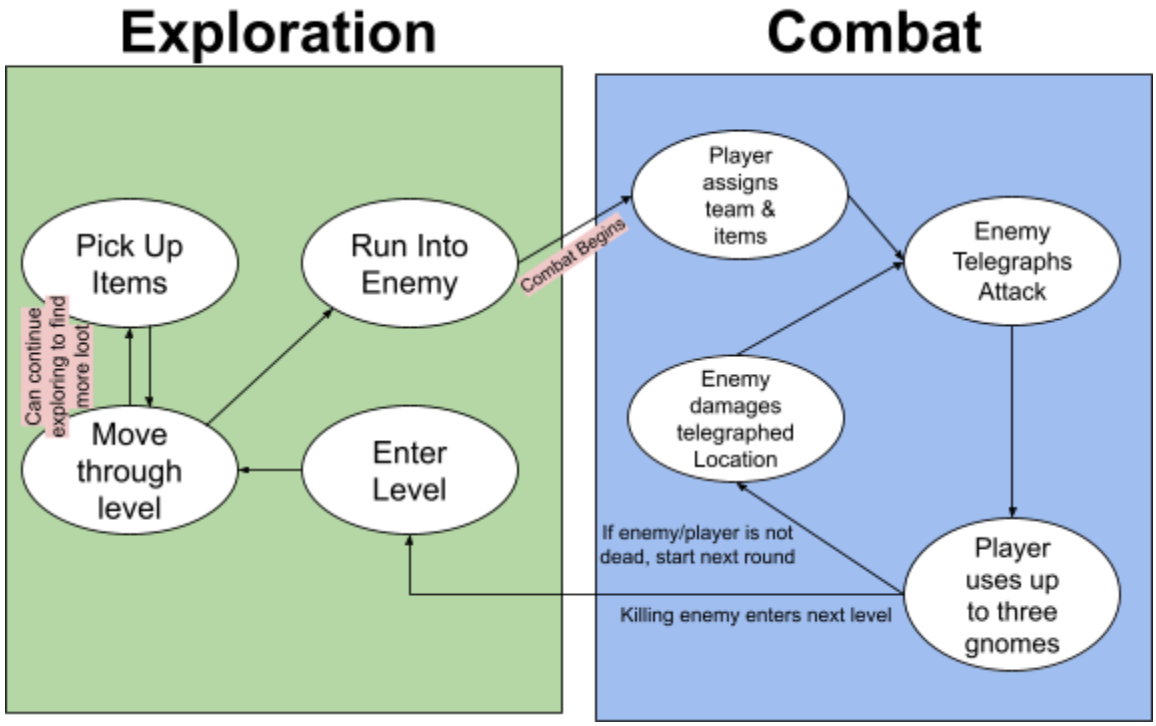
Data Tracking & Insights

- **What You Tracked** – Identify the gameplay data you collected (e.g., character choices, item use, strategy success rates).
    - Tracked metrics:
        - Which gnomes the player selects for their party per combat.
        - How many times players use each gnome’s ability.
        - Whether the player wins or loses the encounter.
- **Key Questions** – List at the **meaningful question(s)** your data helped answer. These should be questions a designer could use later in production to improve gameplay, balance, or content.
    - Our meaningful question was, “Which gnomes are used most often vs least often, and do they correlate with higher success rates?” We wanted to ask this question because we want to ensure each gnome in the game has a useful ability. If a gnome’s ability is never used or picked for combat, then it's a sign that we need to rework or further balance their ability to ensure it is more commonly used.
- **Insights & Adjustments** – What did your data reveal about balance, player behavior, or underused features?

    - Results:
        - Gnome Preferences:
            - Players consistently prefer attacking gnomes in their party.
            - Healing gnomes are used, but less frequently than attackers.
            - Gnomes with positional abilities (e.g., swap) are used rarely or not at all.
        - Ability Usage:
            - Attack abilities are the most frequently used by a wide margin.
            - Healing actions follow closely but are clearly secondary.
            - Movement-based mechanics (swap) are underutilized.
    - Design Implications:
        - The current combat loop rewards direct actions (damage/heal), leading players to ignore positioning abilities.
        - Positional mechanics may need a rework or stronger incentivization - movement needs to be made more necessary or more effective in combat.
        - We need to further consider balancing or designing encounters where non-combat abilities offer clear tactical advantages or are required for optimal play.
- **New Questions** - What new questions would you want to answer with data if you had more development time?
    - Which locations does the player explore vs not explore?
    - Which enemies result in the most deaths for players, and does it follow our intended difficulty curve?

Gameplay

- **Core Mechanics** – Describe the main mechanics of your prototype. Why were they chosen?
    - Gnome Abilities
        - The player controls a large party of 6 gnomes, each with their own unique ability. Many gnome abilities are also enhanced depending on their position - For example, the Coward gnome inflicts a more potent weaken effect if they are located in the back row vs. the front row.
        - This was chosen because we wanted to focus on creating an rpg about controlling a large group of team members, rather than the standard three or four.
    - Party Positioning and Movement
        - Combat revolves around positioning and movement of gnomes. The enemy damages gnomes depending on their position, and many gnome abilities are enhanced in certain positions. Many abilities also cause movement.
        - This was chosen because we wanted to add an interesting positional element to combat, which is not often seen in traditional turn-based RPGs.
    - Enemy Attacks
        - Enemies telegraph their attacks before the player decides their actions. This telegraph shows the player the amount of damage the enemy will deal, and which location the enemy is targeting. This allows the player to use their turn to plan for the incoming attack, allowing them to shield the gnomes present in the target locations, or shift gnomes around to allow a healthier gnome to take the damage instead.

        - This was chosen because we decided that being able to see the enemy's chosen action added an interesting tactical element where the player is able to plan around the enemy's attack.
    - Item Use
        - A variety of items can be added to a gnome to augment their ability, changing their playstyle. For instance, the player can add the Axe item to the healer gnome, making their ability both heal allies and damage enemies.
        - This was chosen because we wanted to add a flexible item system that allowed for interesting and significant changes to the playstyle of any gnome.
    - Item Discovery & Exploration
        - Certain levels such as the Cave area open up into multiple branching paths, allowing the player to explore the area and pick up multiple different items that are found around the level.
        - This was chosen to add a more calming element to the gameplay, which gives the player a break between stressful combats to explore level areas. This exploration also rewards players by allowing them to pick up items.
- **Gameplay Diagram** – Include a diagram that shows how these mechanics connect to player interaction and system feedback.
    - 

- **Gameplay Flow** – Describe a typical player experience. How do RPG systems, environments, and feedback evolve across a full game loop?
    - A typical player experience involves the player exploring around a level with multiple rooms, collecting items as they explore these different rooms, before encountering an enemy at the entrance of the next level. The player progresses across the gameplay loop as they collect more powerful items, and the environments change to become more deadly as the player gets closer to fighting the final boss.
- **Reference Games** – List games that influenced your design and what you drew from them.

- **Darkest Dungeon**
  - This game has a strong emphasis on party synergy and positioning in a 2D turn-based combat system, which we drew a lot of inspiration from for our own position-focused system.
  - Party movement and relative positioning strongly influences the party's effectiveness.
  - 

- **For The King**
  - We used this game as a reference for our lighthearted tone, and for some ideas for the abilities of each of our gnomes.

Visual, Sound, and Narrative Design

***This section is required, its content can be variable**: Include any relevant visuals, audio, and narrative work products created during development. These are examples of materials that teams may submit if they enhance the documentation of their prototype. Not all categories need to be included, but your projects visual, sound, and/or narrative design must be represented in this section. Teams should focus on what best represents their work. Examples of what to include:*

- **Concept Art -** Early sketches or finalized designs for characters, environments, or key visual elements.

  Our game is set in a whimsical garden world, with gnomes as the central characters. To match the playful and cozy tone of the game, we've adopted a funky, cartoonish aesthetic throughout. This is reflected in the character designs, enemy appearances, and ability icons. The art style features exaggerated shapes, soft outlines, and vibrant colors that align with the game's fun and lighthearted theme, creating an inviting and visually engaging experience for players.

Figure. 1 - Enemy Art

Figure.2 - Combat Icons

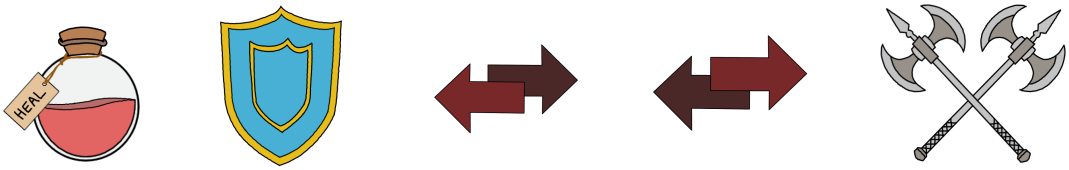


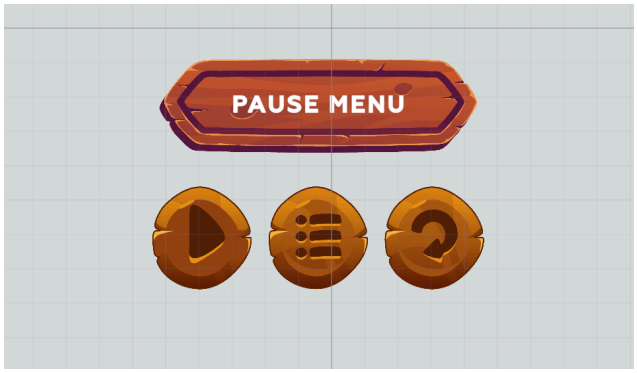
Figure.3 - Ability Pickup Icons

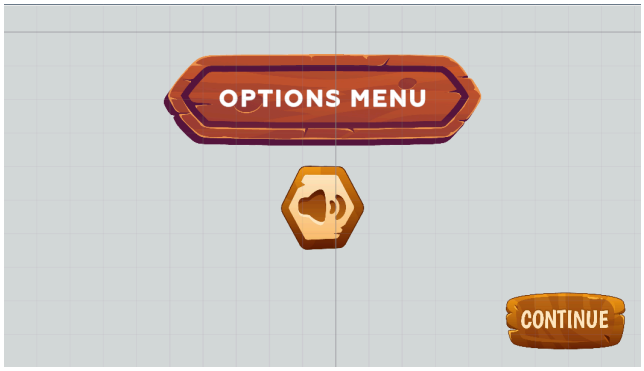
- **Wireframes or Diagrams -** Diagrams showing level layouts, system interactions, or other relevant visualizations.

  The game's UI adopts a simple, minimalistic design that complements the cozy garden theme. To maintain visual cohesion, we use icons with a wood-like texture, evoking a natural, handcrafted feel that blends seamlessly with the game's aesthetic.

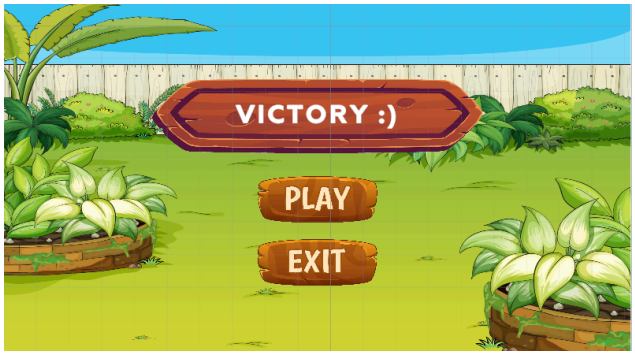
  The Main Menu Scene, as shown below: styled with earthy tones and light atmospheric background, with wood-textured frames and iconography that reinforce the game's cozy, natural aesthetic.

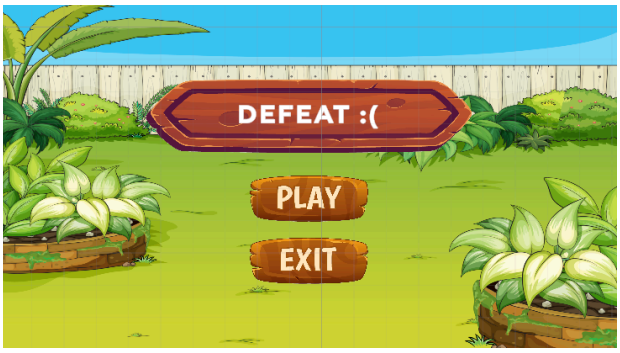
The pause menu and the settings/options menu also follow the same minimalist and earthy tone.





Below are the game over scenes, the player either ends in a victory or defeat.

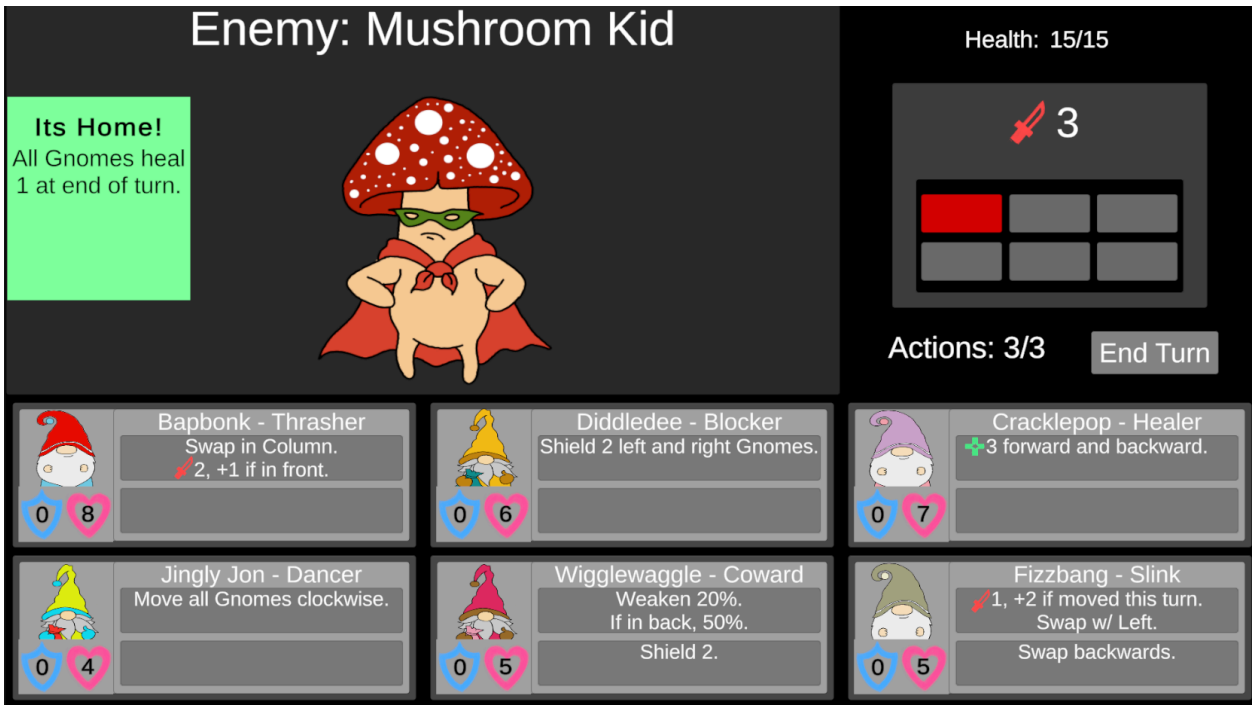




Below is the UI interface for the combat system. The main enemy is shown in the middle part of the screen, and on its right the “Health” is the enemy health (eg: 15/15 - the enemy is at full health).

The panel below it shows where the enemy will attack in the next turn, below it is the current action of the combat interaction (eg. it’s the third turn out of 3 turns)

The bottom-most panel is where the player’s gnomes are placed. The player can place six gnomes that they can use in battle.



- **Character Designs -** Iterations of character visuals, including turnaround sheets or animations if applicable.

  The characters in our game are stylized gnomes that reflect the cozy atmosphere of a magical garden setting. We have developed three distinct gnome base variants, each with

unique silhouettes, shapes, and accessories to visually distinguish them while maintaining a cohesive cartoonish style.

- Master Gnome: The main gnome that the player controls, is actually 3-4 gnomes in a trench coat going on a quest (Figure.10)
- Silhouette Variety: Each gnome variant differs in body shape and posture. For example, one may have a broader build with a curled hat, while another carries a sack, suggesting a different role or ability.
- Simplified Features: Faces are kept minimal, with oversized noses and bushy beards being the defining traits. This aligns with the light-hearted, charming feel of the game.
- Color Variations: To prototype efficiently and allow for a diverse set of characters without creating additional art assets, we use color-swapping techniques. Each gnome type is available in multiple color schemes to differentiate characters for gameplay purposes such as enemy identification or multiplayer selection.
- Visual Consistency: All gnomes share a flat-shaded, hand-drawn aesthetic with soft outlines and muted yet vibrant color palettes, contributing to the cozy and friendly visual tone of the game.

While visually distinct, the gnome variants may represent different character roles (e.g., explorer, gatherer, or mystic) or simply provide cosmetic variety. Their differences are intentionally kept cosmetic at this stage to streamline development and maintain design flexibility during the prototyping phase.

Figure 10 - Master Gnome (Gnomes in a trench coat)

Figure 11 - Three Gnome Variations

- **Narrative Design Doc -** A description of game story and any backstory elements (lore)
- **Environment Art -** Backgrounds, tilesets, or environmental assets used in the prototype.
- **UI Elements -** Icons, menus, or HUD components designed for the game.

  Below are the ui icons that are used in the game

Figure 12 - UI icons

- **Sound Design -** Audio assets, including sound effects, background music, and any interactive audio elements used in the prototype.

  We used the following website to add subtle background audio to our game, helping immerse players in the gnome's world. The audio we used is named "Elven_Procession", from https://tabletopaudio.com/.

- **Style Guides -** Documentation outlining visual rules and themes established during the prototype.

  During the prototype phase, we established a distinct visual language that aligns with the game's whimsical garden setting and gnome-based characters. The core themes emphasize coziness, playfulness, and a handcrafted charm. Key visual rules include:

  - **Cartoonish Aesthetic:** All visual elements adopt a soft, hand-drawn look with clean outlines and simplified forms to enhance readability and maintain a playful tone.

- **Color Variants for Efficiency:** Character diversity is achieved by using a base set of three gnome variants, each recolored to represent different roles or states. This approach saves time on asset production while retaining visual variety.
- **Vibrant yet Soft Palette:** Colors are vibrant but slightly muted to maintain a warm and inviting atmosphere that supports the cozy garden theme.
- **Textured UI Elements:** UI icons and frames feature subtle wood textures, reinforcing the natural theme and creating cohesion between gameplay and interface.
- **Minimal UI Design:** The user interface remains clean and minimal, ensuring that it supports the gameplay without distracting from the visual storytelling of the world.

These foundational visual rules ensure consistency across all assets and guide future development as we expand the visual scope of the game beyond the prototype.

We used the following free assets to keep our visual style consistent:

- Font Used
- UI Asset 1
- UI Asset 2

Design Insights

- **Design Goals Recap** – Restate your core design goals and what you set out to achieve.
  - Gnome Party is a simple RPG with a top-down view.
  - The core game loop consists of turn-based combat. The player can control 6 gnomes, each having different abilities. On their turn, they may choose up to 3 gnomes to perform their individual actions.
  - The player should use their turn to figure out what to do and defeat the enemies. We wanted Gnome Party to be a strategy-based RPG with elements of map exploration.
- **What Worked -** Identify mechanics or systems in your prototype that succeeded and why.
  - The final prototype has a balanced combat system. Players understood that strategy and critical thinking was needed to achieve victory.
  - The environments looked good and distinct and encouraged exploration.
  - The art looked nice and fit the theme perfectly.
- **What Didn't Work** – Discuss what failed or caused friction and how you responded.
  - There could have been more levels and combat encounters.
  - The inventory system felt limited.
  - The levels could have included more props and been more explorable.
- **Emergent Gameplay** – Describe at least one moment from playtesting when the player solved a problem or achieved a goal in a way you didn't predict. What systems enabled that outcome?
  - During the playtest, I saw one player defeat the initial enemy without really reading the gnome cards. Players could initially defeat the enemy by only choosing the gnomes that did damage. This led to us re-thinking the gnome abilities and making sure players could think of strategy before ending their turn.
- **Adaptation Over Time** – How did player problem-solving or system use change through testing?
  - Players either had too easy a time or they found the first boss impossible to defeat.

    - After we adjusted the abilities, players could defeat the boss with little difficulty.
    - Initially, they looked to the gnomes that did the most damage but now, they tended to look at all the available gnomes and how they could utilize their different abilities.
- **Pivot Points** – Document any major changes in design focus or feature priority.
    - Initially, the pivot was to make the User Interface less text-based and more about the visuals. The excessive reading did little to teach new players. We also made the positioning of gnomes more flexible. We expanded the areas and made them thematically appropriate.
- **Team Dynamics -** Reflect on team communication, workflow, and collaboration challenges.
    - The team communicated well and used trello to designate tasks
    - If any member was feeling overwhelmed, we made sure to check on them
    - We prioritized the important tasks first, like implementing the combat mechanics.
    - We checked up on our individual team members during in-person meetings
    - We met as frequently as possible to get the prototype finished.
- **Future Steps**
    - How would the RPG system evolve in a longer project?
        - We would want to add more combat encounters, with varying levels of difficulty. We would also want to increase the gameplay variability through puzzle and explorative elements. It would also be great to add more gnomes that the player can collect and use in their parties.
    - What additional player options or system interactions could be added?
        - We would want to expand the inventory system to give the player more agency and more access to unique item and ability synergies. We would also want to add cutscenes and gnome NPC interactions to tie the game together with a narrative.
    - What balance issues remain unsolved?
        - Currently, players familiar with turn-based games still have an easier time during combat
    - How might data tracking be expanded to support future development?
        - If we take this prototype further, we plan to add more gnomes
        - We plan to track items picked up and how they were used
        - We also plan to track the different routes which can be taken by the player.