

Feature Specs List

This document breaks down each of the systems from the feature list that has been provided. The breakdown includes a brief, the specs and the beat-by-beat for each of the systems with requirements provided whenever needed.

Combat System

Reference #	Feature Name	Top Level Descrip	Implementation Priority	Design Priority	Risk	Comments
1a	Primary Combat	Combat system	High	High	Animations require modifications to the animation system	3rd person, player character can roll with [i frames] (invisibility frames), skills can be mapped to a variety of keybinds appearing in the skill bar at the bottom of

Brief -

Core Pillar: Player chooses from a very limited set of characters, which provide tailored equipment and skills.

The purpose of this feature is to establish the general system behind the attack mechanics in the game, offering attacking and defensive skills also with a unique set of skills per character chosen. Combat will constitute a significant portion of the game's core gameplay. The combat system should provide a learning curve, allowing players to develop their skills gradually. This progression enhances the sense of achievement as players become more proficient in combat mechanics.

The third-person perspective provides players with a broader view of their character and the surrounding environment. This enhances situational awareness and immersion by allowing players to see their character's actions and movements in the game world.

Locking on to enemies allows players to maintain focus on a specific target during combat. This will be important to each level and their varying adversaries and scenarios where precision targeting is crucial. The lock-on feature enables strategic decision-making during battles, especially in party situations, allowing players to prioritize threats and execute maneuvers effectively in coordination with self and party members.

Rolling with i-frames provides players with a means of evading enemy attacks. This adds an element of skill-based gameplay, requiring well-timed rolls to avoid damage.

Players will have the opportunity to map skills to a variety of keybinds and displaying them on a skill bar. Players can tailor their controls to match personal preferences and playstyles.

We will want to emphasize distinct visual effects for each weapon for their uniqueness of weapon and elemental type. This visual feedback helps players quickly identify the weapon they are using and adds a layer of visual satisfaction to combat.

Spec

- Primary combat system will consist of skills (useable with bind)
 - Skill will pertain to character and will be unique and offer advantages to a certain combat situation
- Primary combat system will consist of attack types (useable with bind)
 - A main attack of which has consistent damage and relies on the weapon being used
- Primary combat system will consist of defensive types (useable with bind)
 - A main defensive skill that protects against incoming damage (shield defense)
- Will contain break down of weapon being used (heavy, light, high damage, low damage)
 - An outline of weapon statistics and details that show weight (effects swing speed), and damage.

Requirements

- A skill must be attached to a bind for use
- A skill/attack must occur within range of an enemy in order to deal damage (otherwise just a swing mechanic)
- A skill/attack must rely on the weapon being used and its statistics
- A skill/attack must impact an enemy different (different damage dealt, and spell type's effectiveness)

Beat by Beat:

1. Player enters game and level
2. Player moves along the dungeon, progressing through the level
 - a. Decision between looting
 - b. Player finds weapon and decides between trading it with current
3. Player engages with an enemy
 - a. Uses certain attack and attack varies in damage and effectiveness
 - b. Go back to (2)

Asset List (linked full version in google tables(choose three dots (linked table options) and select “open source” to view the whole list)

Combat System	
C	Melee Combat

The following are the systems for the different parts of combat:

Magic

Reference #	Feature Name	Top Level Descrip	Implementation Priority	Design Priority	Risk	Comments
1b	Magic	Combat sub-system	High	High	Balance between spells and combat	Balance spells to be as much utility as 'big damage'

Brief:

The magic system is an element players can choose to work with within their own gameplay. It will enrich gameplay and expand the range of experiences for players

A balanced magic system will influence the design of enemies and challenges. Enemies will have vulnerabilities to specific types of spells, requiring players to adapt their strategies. Utility spells can be employed to exploit weaknesses or mitigate enemy threats.

Spec:

- Players use Magic as a way to attack enemies

Beat by Beat:

1. Player joins dungeon
2. Player starts fighting enemies
3. Player uses spell to attack enemies
4. Go back (2)

Critical Hits

Reference #	Feature Name	Top Level Descrip	Implementation Priority	Design Priority	Risk	Comments

1c	Critical Hits	Combat sub-system	Medium	Med	Understanding what enemies should have what elemental weaknesses (Enemy types like zombies are weak to holy damage)	This accounts for stealth, critical strike chance, and elemental damage types. If you hit a critical strike, you do double the
----	---------------	-------------------	--------	-----	---	--

Brief:

A critical hit system will introduce an element of unpredictability and excitement to combat. Players can experience moments of intensity and thrill when their attacks land critical hits, creating a dynamic and engaging combat experience.

Critical hit systems will be influenced by the type of weapons and equipment used. Certain weapons may have a higher critical hit rate or deal increased critical hit damage, encouraging players to experiment with different loadouts and playstyles.

Critical hits will be tied to specific enemy vulnerabilities. Players can analyze and exploit these weaknesses to maximize their damage output, adding an element of strategy and immersion to dealing with different enemy types. In relation to feature 1b, different elemental advantage will take place depending on enemy type and player weapon, while this critical hit system emphasizes more on hitting vulnerable enemy spots such as headshot and back hit.

Critical hits often lead to moments of heightened player satisfaction. Successfully landing a critical hit can evoke a sense of accomplishment and empowerment, reinforcing positive feedback and motivation to continue playing.

Spec:

- A critical hit against any enemy will cause much more damage. This incentivizes the player to try to hit the enemy's head or look for weaknesses so they can defeat them quicker.
- Adds a layer of reality since hitting a head should always be more damaging than hitting an arm

Beat by Beat:

1. Player joins dungeon
2. Player starts fighting enemies
3. Player hits enemy with a critical hit causing enemy to suffer a large loss in health quickly
4. Go back (2)

Mana

Reference #	Feature Name	Top Level Descrip	Implementation Priority	Design Priority	Risk	Comments
1d	Mana	Combat sub-system	Low	Med	Spells would require too much/little mana to cast, which affects the level	Balance around 'Mana Regen', different spells different mana costs. The only

Brief:

For combat, there is a Mana sub system in place which will go hand in hand with the magic system. Mana is like an energy bar for using spells. When the player uses a spell, the Mana bar will decrease and will need to be refilled for use again. Different spells have different powers so the mana cost will also vary depending on which is used.

This subsystem introduces the idea of having limited power when using spells. It makes the player think a bit more before using spells very frequently. This changes the player's strategies and also makes them think about which spell is more appropriate in a situation.

Spec:

- Players have a Mana bar for spells to avoid spamming spells to destroy enemies.
- Mana makes combat more interesting since the player must make good decisions when using certain spells.
- When a player runs out of Mana, they must use a different weapon to attack enemies or restore Mana.

Beat by Beat:

1. Player joins dungeon
2. Player starts fighting enemies
3. Player uses Mana for spells while fighting
4. If player runs out of Mana:
 - a. Change weapons to something that does not use Mana
 - b. Restore Mana
5. Go back (2)

Cover

Reference #	Feature Name	Top Level Descrip	Implementation Priority	Design Priority	Risk	Comments
-------------	--------------	-------------------	-------------------------	-----------------	------	----------

1e	Cover	Ability to hide behind objects	Medium	Med	Objects need to be of certain heights, specs need to be created	Would make the combat system more interesting, goes with senses system. Allows the player to hide behind objects to avoid projectiles
----	-------	--------------------------------	--------	-----	---	---

Brief:

Cover will introduce a tactical element to gameplay, requiring players to make strategic decisions about when and where to take cover. This adds depth to combat encounters, encouraging players to consider their positioning and surroundings during engagements.

The cover is essential for player survivability. It provides a means for players to protect themselves from enemy attacks, reducing the risk of taking damage. Players can strategically use cover to regenerate health, utilize stealth, or coordinate their next moves in the midst of intense combat.

There will be in-game objects of varying heights and specifications that can be used as cover during combat. This introduces tactical considerations, as players must strategically choose a cover based on its height, durability, and position relative to both allies and enemies. Tactical cover usage adds layers of strategy and depth to engagements. For example, players can utilize barrels, trap boxes, boulders, and other structural elements relevant to dungeons to their cover advantage. This will also go hand in hand with map design.

Spec:

- Players can hide behind objects to hide from enemies or to avoid some enemy shooting at them.
- This adds another layer of strategy to the game and allows the player to take a small break during combat to reconsider their plan moving forward.

Beat by Beat:

1. Player joins dungeon
2. Player starts fighting enemies
3. Player takes cover behind an in-game object
4. Player stops taking cover behind object
5. Go back (2)

Respawn

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Prior	Risk	Comments
1f	Respawn	Respawn	Medium	Med	Balanced so player character can't abuse	When enemies respawn, they come back for slightly reduced currency and a slight reduction to item drops

Brief:

A respawn system ensures a continuous level of challenge for players.

Without an enemy respawn system, players might exploit cleared areas to grind experience points or gather resources endlessly. The respawn system prevents such exploits, maintaining a balanced progression curve and preventing unintended advantages. The respawn system will also prevent players from exploiting the system to farm excessive currency or items. Without balance, players might repetitively defeat respawning enemies to gain an unfair advantage, disrupting the intended progression and challenge. A balanced respawn system contributes to a smoother progression curve. Players are less likely to experience significant power spikes or sudden wealth accumulation, which can disrupt the pacing and challenge intended by the game designers.

Balanced respawn mechanics will incentivize players to explore the game world. If enemies respawn with reduced rewards, players are more likely to venture into new areas and engage with a variety of challenges rather than exploiting a single location.

Spec:

- The reduction in currency and item drops during respawn makes it harder for the player to become more powerful in just one level. It forces the player to go to the next level of the game.

Beat by Beat:

1. Player joins dungeon
2. Player defeats enemies and picks up dropped loot
3. More enemies spawn and try to attack player
4. Player defeats enemies and picks up lesser loot than the previous spawning of enemies
5. Go back (2)

Stealth

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Prior	Risk	Comments
1g	Stealth	Combat sub-system	Medium	Med	Balanced so player can't abuse stealth to never be seen, but also so it feels skill-	In stealth, the player is not visible and will not be attacked. Attacking from stealth will guarantee a critical strike. The player enters stealth by staying out of vision, hiding behind objects, and staying

Brief:

Stealth as a playstyle is integral to the game's combat system, providing players with the option to navigate challenges through avoidance and strategy. Players must utilize the environment, character positioning, timing, and skills to remain undetected.

When a player engages an enemy from stealth, they are guaranteed a critical hit, rewarding strategic positioning and timing. This mechanic emphasizes the importance of the first strike and encourages thoughtful gameplay. To balance this mechanic, enemies are designed with complex patterns and may search out the player if suspicions are provoked.

Spec:

- Stealth is a constant choice, demanding continuous player engagement.
- Guaranteed critical hits from stealth encourage planning and precision, rewarding players who master this playstyle.
- Enemy AI can become suspicious and actively search for the player based on player actions and environmental cues.

Beat by Beat:

1. Player engages in stealth by managing sight lines and noise level to approach enemies.
2. When attacking from stealth, the player inflicts a critical hit, doubling the damage they do to the enemy.
3. Successful stealth gameplay allows players to thin enemy numbers tactically before directly engaging a horde of enemies.
4. Players must be careful to observe enemy patrol routes, visibility conditions, and noise generation.

Player Respawn

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Prior	Risk	Comments
1h	Player Respawn	Player Respawn	High	High	Balanced so the player can't abuse leveling	When the player gets to 0 health, they will go into a "down" state. A teammate must revive the player to get them back in the fight. If every player downs, the players restart the level. On restart, they lose all XP/equipment they had

Brief:

The Player Respawn system is designed to balance risk and reward within the game. Upon a player's health reaching zero, they enter a "downed" state, allowing for a window where teammates can revive them and prevent a team wipe. This system adds a layer of cooperative strategy, since players must work together to avoid a total defeat.

If all players are downed, it triggers a level restart. To prevent level farming and keep the challenge, any XP or equipment acquired during that level is lost upon respawn. Additionally, the level layout and enemy placements are randomized, ensuring that each attempt feels fresh and maintains a high difficulty level.

Spec:

- A downed state before total defeat allows for possible revival by teammates.
- Team wipes result in the level restarting with all progress for that attempt being lost.
- Randomization of level details upon restart keeps the gameplay challenging and prevents memorization or exploitation of level layouts.

Beat by Beat:

1. Player's health drops to zero; they enter a downed state.
2. Teammates have unlimited time to revive the downed player.
3. If revived, the player re-enters the fight with a portion of their health.
4. If all players are downed, the entire team respawns at the level's beginning.
5. Upon respawn, the level's layout and enemy placements are randomized.
6. XP and equipment gained in the failed attempt are lost, preventing farming.

Enemy System

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Prior	Risk	Comments
2a	Various appearances for enemies	Advanced enemy system	High	Low	Animations could prove difficult, also creating attacking animations needs to be clear for player character	Only a reference for the type of enemies that could be seen deeper within the dungeon levels. Due to our central themes, enemies could become very distorted, reminiscent of arachnids, octopi, scuttlefish. Key themes in dark fantasy and lovecraftian horror with the unknown tends to depict them with deep aquatic imagery (Cthulhu being giant octopus),
2b	Enemy Awareness	Senses System / Enemy AI System	High	Mid	Could feature issues (bugs) with terrain,	Enemies need to be able to have field of vision, hearing, and general awareness of player character, certain player skills interact with enemy hearing/vision
2c	Haste	Haste System	Medium	Low	Could be a damper to casual player experience,	Code Name: MR.X, presents can be altered with difficulty slider, can be defeated, but main purpose is to inspire a sense of urgency within player character, and progression

Brief:

Core Pillar: User can interact with items and environment to help them progress through the game and defeat enemies

The purpose of this feature is to establish the outline of the enemies in our game. We have their awareness of which is affected by the stealth system (see stealth feature), we have our different enemies bosses or just a regular encountered enemy throughout the dungeon.

The haste system will put an emphasis on completing each level faster than just a casual player. The player will feel the consequences of waiting around or taking too long to complete a task when enemies stronger than normal in packs attack the player. This also increases the difficulty of the boss at the end of the level.

Spec:

- The enemy system has a subsystem of 3, where we have our advanced enemy system, senses / awareness system, and our haste system. The advanced enemy system will be our designated system for enemy appearance where we have enemies that aren't all the same, some of which have different attacks, sizes, health, strength, and weaknesses. All of which are dependent on how far along you are and what character you have chosen.

Requirements

- Stealth to be used for interactions with the senses system
- Will need to set an incremental timer for enemy spawn to match with player activity time per level
- Haste system - our "hurry up" system, this system allows us to punish and increase the difficulty for a player who is taking too long in a certain area. This will in turn force the player to continue to move and also will make the player's experience more intense.
- Character selection would offer potential weaknesses and buffs for characters against certain enemies around the dungeon. Potential to also use ranged attacks if the ranger is chosen.

Beat by Beat:

1. Player chooses a character
2. Player enters the dungeon, and moves along the dungeon with or without the stealth system
 - a. If a stealth system is being used, enemy awareness is reduced for that player.
 - b. The player also encounters various enemies which are a part of our advanced enemy subsystem where an enemy with randomness will have different abilities, buffs, and weaknesses to the player(s).
 - c. Haste- if the player is taking too long in an area or section of the dungeon, the haste system effect will occur, where the amount of enemies and their strength will punish the player for taking their time. This allows us to make the player move along faster, offering a more intense and immersive experience.
3. Player engages in a fight with an enemy
 - a. The enemies strengths and weaknesses are shown through damage indicators for each attack. This further shows our implementation of the advanced enemy subsystem
 - b. Go back to (2)

Asset List: (linked full version in google tables(choose three dots (linked table options) and select "open source" to view the whole list)

Enemy System			
D			

2b	Enemy Awareness	Senses System / Enemy AI System	High	Mid	Could feature issues (bugs) with terrain,	Enemies need to be able to have field of vision, hearing, and general awareness of player character, certain player skills interact with enemy hearing/vision
----	-----------------	---------------------------------	------	-----	---	---

Brief:

Core Pillar: User can interact with items and environment to help them progress through the game and defeat enemies

The purpose of the enemy awareness system is to allow the player the ability to play the game in multiple unique ways. Where they can maximize contact with enemies or they can play stealthy and progress without tons of engagements between enemies.

Spec:

- The enemy awareness system is essential because it allows our enemies to locate the player or not if the player is utilizing cover or another stealth system. Of course all stealth will not be 100% successful in avoiding enemies allowing for a somewhat realistic approach from the enemies.

Requirements

- Stealth to be used for interactions with the senses system
- Will need to set incremental timer for enemy spawn to match with player activity time per level
- Haste system - our “hurry up” system, this system allows us to punish and increase the difficulty for a player who is taking too long in a certain area. This will in turn force the player to continue to move and also will make the player's experience more intense.
- Character selection would offer potential weaknesses and buffs for characters against certain enemies around the dungeon. Potential to also use ranged attacks if the ranger is chosen.

Beat by Beat:

1. Player joins dungeon
2. Player progresses throughout the dungeon and faces engagements
3. Player utilizes stealth in a certain way to avoid an enemy
 - a. If spotted the enemy disregards they're stealth
 - b. If not spotted the player may pass through as long as not seen
4. Go back (2)

Inventory System

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Prior	Risk	Comments
3a	Item	Inventory System	High	High	Certain items (Health potions, mana potions) are pivotal for player enjoyment though there is randomness to item drops there should be 'guaranteed' drops	Inventory needs to be set up in an intuitive way, items need to feel impactful

Brief -

Core Pillars:

1. Exploring their classes' backstory unlocks different skills, spells, abilities, and items to aid in the player's run
2. The player can customize and progress their character via combat and interactions, combines a couple of the items.
3. Users can use the economy system to upgrade character, buy customization, and items through the interaction with NPCs

The purpose of this feature is to give players a place to store and keep their items, given that they have space. A player will be able to find and store items that they may be able to use/trade/sell.

Spec -

- The inventory system is our essential storing system. This is the system where a player upon finding something they cannot carry in their hands stores it in their limited** inventory. The inventory has a size, since the player can become encumbered. Again, storing in a player's inventory has an effect on other things such as speed. Speed will slow as you carry more or heavy items.

Requirements

- Implement sorting and filtering options to help players organize their inventory. Allow them to sort items by category, rarity, and type. Filtering options can assist in quickly finding specific items.
- Include drag-and-drop functionality to allow players to easily move items within the inventory. This feature enhances user interaction and provides a more dynamic and responsive inventory management experience.
- Define item stack limits and overall inventory size. Implement visual indicators to show remaining capacity and notify players when their inventory is full.
- Provide detailed information about each item through tooltips. When players hover over an item, display relevant details such as item type, stats, and any special attributes. Clear and concise tooltips enhance player understanding.

- Search feature for quick access
- Display integration for character stats affected by equipped items. This allows players to see how equipping or unequipping items influences their character's abilities and attributes directly from the inventory screen.

Beat by Beat:

1. Player enters game and level
2. Player moves along the dungeon, progressing through the level
 - Noticing visual queues for new items/chests and useable objects
3. Player engages with an enemy
 - When an enemy dies, items may be dropped and picked up in which will be outlined in a glow effect
 - Go back to (2)

Asset List: (linked full version in google tables(choose three dots (linked table options) and select “open source” to view the whole list)

Progression System

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Priority	Risk	Comments
5a	Currency system	Economy / Currency / Experience	Low	High	Different drop rates for different enemies, balance around costs for different	Currency will be earned from combat, Can be used as a means to level character,

Brief -

Core Pillars:

1. Users can use the economy system to upgrade character, buy customization, and items through the interaction with NPCs
2. User can interact with items and environment to help them progress through the game and defeat enemies

The purpose of this feature is to set up a progression line for the player. It's for when a player completes a dungeon or gains currency upon collection and in addition completes/upgrades a skill of the player.

Spec -

- The progression system is to “save” the progress a player has made. Whether the player has upgraded a skill, obtained currency, or collected a new item, it all comes through the

progression system where it is stored into a “save/load” type mechanic. The player will have a skill-tree that will move along upon unlocks and upgrades

Beat by Beat:

1. Player joins dungeon
2. Player moves along dungeon collecting currency
 - a. Progression system invoked
3. Player engages in a boss fight and completes it, receiving currency and skill points
 - a. Progression system invoked
4. Player uses skill points to upgrade a skill, increasing its effects or unlocking a new ability furthering through the skill-tree
 - a. Progression system invoked

5b	Skill Progression	Skill Tree system	Medium	High	Game Balance, accounting for enemy interaction with player character possible skills	Skills will have different physics interactions, some spells have positive/negative interactions with other player character spells. The player starts with 2 active skills for all subclasses. When the player levels up through earning XP, they get one skill point that they can spend on one skill. They must have unlocked the previous skill in the subtree to be able to purchase this new skill. They can click again on an earned skill to remove it and use
----	-------------------	-------------------	--------	------	--	--

Brief -

Core Pillars:

2. User can interact with items and environment to help them progress through the game and defeat enemies

The purpose of this feature allows the player to level up skills of which they have to unlock via a skill tree. Through progression, the player gets stronger and unlocks potential items and new abilities that may prove beneficial.

Spec -

- The progression system is to "save" the progress a player has made. Whether the player has upgraded a skill, obtained currency, or collected a new item, it all comes through the progression system where it is stored into a "save/load" type mechanic. The player will have a skill-tree that will move along upon unlocks and upgrades

Beat by Beat:

5. Player joins dungeon
6. Player moves along dungeon collecting currency
 - a. Progression system invoked
7. Player engages in a boss fight and completes it, receiving currency and skill points
 - a. Progression system invoked
8. Player uses skill points to upgrade a skill, increasing its effects or unlocking a new ability furthering through the skill-tree
 - a. Progression system invoked

5c	Stat System	Player stats per level	Medium	High	If stats end up unbalanced, the game could become super easy or super hard for certain classes.	The player stats are Health, Mana, Defense, Strength, Dexterity, Lethality, Intelligence, and Wisdom. When the player earns enough XP to level up, they immediately level up and gain these stats. A "Level up!" popup should appear to indicate that they have
----	-------------	------------------------	--------	------	---	---

Brief -

The Stat System controls the progression of characters, ensuring a tangible sense of power scaling. As players earn experience points (XP), they level up, which immediately increases their stats, enhancing their combat capabilities. The system rewards XP gains with stat boosts, tailored to the class's role. A notification, such as a "Level up!" popup, informs players of their progression.

The Stat System is carefully designed to maintain game balance across different classes, ensuring that no class becomes too powerful or weak as they level up. Wizards remain the sole class with Mana, which is used for casting spells, while other stats like Health and Defense are universally important.

Spec -

- Stat gains per level are predefined for each class.
- A notification system is in place to inform players of level-ups.
- Balance checkpoints are integrated to monitor and adjust class progression if needed.
- Mana is an exclusive stat for Wizards, used as a resource for spellcasting.

Beat by Beat:

1. Player earns XP through gameplay (combat, quests).
2. Upon reaching the required XP threshold, the player levels up.
3. The player receives a clear visual and/or auditory signal that they've leveled up.
4. Stats increase automatically upon leveling, with the amount and type of increase being class-specific.
5. The player continues gameplay with enhanced capabilities, allowing players to face stronger enemies.

Asset List: (linked full version in google tables(choose three dots (linked table options) and select “open source” to view the whole list)

Progression System						
G						

Economy System

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Priority	Risk	Comments
5a (6)	Currency system	Economy / Currency / Experience	Low	High	Different drop rates for different enemies, balance around costs	Currency will be earned from combat, Can be used as a means to level character, purchase items, upgrade items,

Brief -

Core Pillars:

1. Users can use the economy system to upgrade character, buy customization, and items through the interaction with NPCs

The purpose of this system is to build an economy of which can be used for upgrades on weapons, purchases with the trader, or collection to build wealth.

Spec -

- The currency system is a system of which upon looting, killing, selling, trading, buying its invoked. It's important for the system to exist in our game because of its usefulness for the player. The player can buy new stronger weapons or the player can sell a weapon to buy a different one and such. It gives the player their own responsibility with their wealth and the decisions to wait to buy or to buy an upgrade/weapon that seems necessary for that player.

Beat by Beat:

1. Player joins dungeon
2. Player moves along dungeon collecting currency
 - a. Currency system invoked
3. Player engages in a boss fight and completes it, receiving currency and skill points
 - a. Currency system invoked
4. Player uses skill points to upgrade a skill, increasing its effects or unlocking a new ability
 - a. Currency system invoked

Asset List: (linked full version in google tables(choose three dots (linked table options) and select "open source" to view the whole list)

Economy System						
H						

Explore System

Reference #	Feature Name	Top Level Description	Implementation Priority	Design Prior	Risk	Comments
7a	Environment selection	Level Generation System	Low	High	Each variation of levels needs to be equally accessible	Levels have 4 different level layouts, where each core level of the dungeon has variations with the same 'basic components' (i.e.
7e	Cover	Ability to hide behind objects	Medium	Med	Objects need to be of certain heights, specs need to be	Would make the combat system more interesting, goes with senses system

Brief -**Core Pillars:**

- Exploring their classes' backstory unlocks different skills, spells, abilities, and items to aid in the player's run

The purpose of this system is to build the game mechanics for the player. The player will be impacted upon any decision, for example to keep a heavy weapon over a light one. It allows outlines the gameplay where the player can hide behind objects to use the stealth system or to rest to regenerate health/mana. The player also will have abilities to fast-travel to move through the dungeon if a fast-travel location is unlocked. The player also has the ability to uncover the story through NPCs around the dungeon and make decisions to/for those NPCs and this can have positive and negative outcomes

Spec -

- The explore system is a system of which the player will have many different additional mechanics to worry about but also utilize. The speed of the player is dependent on their weight (inventory, not customization weight). In addition to fast-traveling around the dungeon(s) if those fast-travels are unlocked. Also, the use of NPCs may prove useful if an NPC is helped out or if the player chooses to abandon/lie/or just stay neutral, all have an impact on the NPCs behavior.

Beat by Beat:

- Player joins dungeon
- Player progresses through dungeon levels.
- Player finds safe-rooms and items inside, which unlocks a fast-travel
- Player finds environmental objects of which they can hide behind utilizing stealth
- Go back (2)

Asset List: (linked full version in google tables(choose three dots (linked table options) and select "open source" to view the whole list)

Explore/Environment System

7e	Cover	Ability to hide behind objects	Medium	Med	Objects need to be of certain heights, specs need to be	Would make the combat system more interesting, goes with senses system
----	-------	--------------------------------	--------	-----	---	--

Brief -**Core Pillars:**

- Exploring their classes' backstory unlocks different skills, spells, abilities, and items to aid in the player's run

The purpose of this system is to offer the player the use of their environment. Essentially the player can use objects and boxes and such around the player to cover/hide from enemies. This offers additional functionality to the stealth system.

Spec -

- The cover system offers the player the ability to use their environment to hide and increase their stealth. Stealth offers the ability for the player to avoid contact with enemies and decrease the amount of engagements the player gets into.

Beat by Beat:

Player joins dungeon

Player progresses through dungeon levels.

Player finds safe-rooms and items inside, which unlocks a fast-travel

Player switches weapon, increasing his weight so his speed drops

- a. If Player continues through the dungeon and decides to come back, so the player fast-travels back.
- b. If Player continues through dungeon and decides to not comeback (yet) player continues

Player encounters NPC and makes a decision

- c. Positive outcome
- d. Negative outcome

Go back to (2)

7 d	Rest	Rest System	Medi um	Hi gh	Too frequent/rare rest areas can affect the difficulty of game progression	When player rests 'lesser' enemies can respawn, player character gets health/mana back
--------	------	----------------	------------	----------	--	--

Brief -

The purpose of these two specs is to show the importance of the safe-rooms. Upon finding a saferoom resting and fast-travel may become available which offer their benefits. They offer the player a potential "reset" after a big fight or after looting through many enemy hordes.

Spec -

- The rest system allows for regeneration of health and mana allowing a reset for the player. However, constantly healing yourself will increase your game difficulty and offer a bigger challenge.
- The fast travel system allows for a traveling between safe-rooms and the start so that the player can access places faster.

Beat by Beat:

1. Player joins dungeon
2. Player progresses through dungeon levels.
3. Player finds safe-rooms and items inside, which unlocks a fast-travel and player can rest
 - a. If player rests, a lot of increase difficulty
4. Go back to (2)

7c	NPCs	NPC System	Low	High	Killing NPCs can [soft-lock] characters from certain experiences, must incorporate these [needed] NPCs into	NPCs offer services[in exchange for currency], smithing, merchants, quest lines [with rewards]
7c	Dialogue	NPC subSystem	Low	High	Players could be unhappy with their character's play style after choosing a dialogue option they may morally agree with	Within player customization, the player character chooses a variety of dialogue options unique to the player character's class. This effects some of

Brief -

The purpose of the NPC and NPC subsystem is to establish our story and shop. Essentially, our NPCs will offer aid to those who choose to help them (trading, storyline, and advice) and will not aid those who betray them (kill them). The NPCs carry important information and upgrades that can prove to be extremely helpful overtime.

Spec -

- The NPC system offers services aka a UI in which a player can interact and use currency to purchase items/potions/etc. But also where a player can sell and break down their weapon.

Beat by Beat:

1. Player joins dungeon
2. Player finds a saferoom or randomly spawned NPC
 - a. Player interacts with the NPC and is offered storyline information
 - b. Player interacts with the NPC and is provided a UI in which they can buy/sell/trade
3. Go back to (2)

General System

Reference #	Feature Name	Top Level Descrip	Implementation Priority	Design Prior	Risk	Comments
8a	Lighting	Dynamic Lighting System	High	High	Different levels of lighting from different objects	Different levels with have variations of lighting, player skills can interact with

8b	Player vision	Vision system	High	High	Player vision needs to be restricted by	Camera follows the player in a 3rd person mode
8ba	Mini map	Vision System	High	High	Mini map shouldn't show enemies before the player	Shows the basic level layout and enemies once they are

Brief -

Lighting, player vision, and mini map work cohesively in providing gameplay information in real time for combat. They are integral components of gameplay that contribute to atmosphere, immersion, navigation, and strategic decision-making. These elements enhance the player's understanding of the game world and provide tools for engaging with various aspects of the gameplay experience.

Lighting is crucial for creating a specific atmosphere and setting the tone. Map designs will utilize this element to reveal details and create visibility.

The player's vision serves as a primary means of perceiving the game environment. Player should know the range of their vision cone on mini-map for stealth mechanics if need be. Players need to be aware of their visibility to enemies and use cover or other environmental features to remain undetected.

A mini-map provides a condensed and easily accessible overview of the game world, aiding players in navigation. Important objectives, waypoints, or markers should be displayed on the mini-map upon player exploration and discovery. This includes things like enemy indicators to allow players to be aware of nearby threats. Mini-maps can convey contextual information, such as the locations of resources, safe rooms/points, and gate level advancement. This helps players make informed decisions about where to explore or how to approach specific challenges.

Spec -

- Implement ambient lighting to provide a baseline level of illumination throughout the different levels of dungeon levels
- Utilize dynamic shadow casting to simulate realistic interactions between light source, objects, and player

Requirement -

- Implement customization options for the mini-map, such as zoom levels or toggling specific information, allows players to tailor the interface to their preferences
- Clear UI distinction between different contextual information within mini-map
- Mini-map should not reveal enemies before they are detected by the player's vision, maintaining a balance between providing information and preserving elements of surprise

Beat by Beat:

1. Player enter new environment

- a. Mini-map displays darkness except player vision cone
- 2. Player explores map
 - a. Mini-map updates upon discoveries
 - b. Object and environmental lighting revealed

Asset List: (linked full version in google tables(choose three dots (linked table options) and select “open source” to view the whole list)

General System (Vision)				
K				

9	Audio	Audio System	High	H ig h	Different audio cues from enemies to bosses to loot to trading	The variations of audio allow for the player to distinguish between what is around and what isn't
---	-------	--------------	------	--------------	--	---

Brief -

The purpose of an audio system is to allow our player cues through audio to distinguish between different things. Its essential for an audio system to be implemented because of its

Spec -

- Implement audio to allow for a systematic amount of gameplay, allowing a player to tell what is around and what isn't easily.
- The audio system offers the player enjoyable medieval gameplay music and additional sounds to distinguish between enemies/bosses/loot and other potential cues. Its essential for implementation because of its impact on the player's decisions

Requirement -

- An audio system to which the player can connect output.
- A system to select which audio will be played
 - Casts
 - Attack/Damage
 - Charge
 - Haste System
 - Item Pickup
 - Level up
 - Currency use/collection
 - Fast travel/Rest
 - Dynamic Audio

Beat by Beat:

1. Player joins dungeon
 - a. Medieval gameplayer music is started

2. The player progresses through dungeon
 - a. Noise is heard from enemies, potential safe rooms, NPCs, and loot
 - b. Noise the player outputs is decreased if in stealth
 - c. Player noise is loud and heard by enemies if not in stealth
3. Go back (2)

9		Animation System					
10a	Animation	Animation System	High	H ig h	Animations allow for concise visual cues	Variations of animations range from attacks/speed/and current player use	

Brief -

The purpose of this system is to add visual effects for the player to notice and tell what may be coming or what a player has done (attack or incoming attack)

The animation system is one of high priority. It's important to understand that animations add to a player's gameplay and the ability to read the enemies and his environment. Additional uses of animations are to add visual appeal, game mechanics, storytelling (NPC interaction), and somewhat technical visibility.

Spec -

- Implement animations for visual support
- The animation system adds variety to the player. Based on what the player is doing (magic, normal attack, resting) there will be an accompanied visual animation

Requirement -

- Player must have visuals enabled in settings
- A system to select which audio will be played
 - Casts
 - Attack/Damage
 - Charge
 - Haste System
 - Item Pickup
 - Level up
 - Currency use/collection
 - Fast travel/Rest
 - Dynamic Audio

Beat by Beat:

1. Player joins dungeon
 - a. Medieval gameplayer music is started
2. The player progresses through dungeon
 - a. Player animation is played based on attack and weapon

- b. Enemy animation is visible by the player to see incoming attacks
- c. Map animations are visible to locate and visually indicate certain important items/areas.

3. Go back (2)