

TEAM SUPER HERO SQUAD PRESENTS
THE CITADEL OF STORMS
REQUIREMENTS ELICITATION DOCUMENT

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1. INTRODUCTION

1.1 PURPOSE

This purpose of this document is to describe the functions and features of the text base adventure game, “The Citadel of Storms”. It will contain a complete guide for the development of the game. It will also explain commands, actions, functions, and features. The primary intent behind this document is for the development team to have a clear understanding of how the game should function and reducing their decisions to technical details.

1.2 SCOPE

“The Citadel of Storms” is a text-based adventure game where the player can navigate through rooms, discover and use items in a variety of ways, fight monsters, use a shop, and solve riddles. The player will be able to win the game by defeating the Sorcerer Boss Monster, and the player will lose the game if their HP ever reaches 0. Additionally, the player will be able to save and load their game locally on their computer, so they can pause their adventure anytime.

1.3 DEFINITIONS AND ABBREVIATIONS

Term/Abbreviation	Description
The Player (PLAYER)	Anyone playing the game. We assume they can read the English language, use a computer interface (mouse, keyboard, and monitor) and has been educated to an elementary school level or above.
Random	A number chosen from a given range using pseudorandom number generation provided by the programming software.
User-Friendly	Used to define some part of the interface to have an evident meaning and be clearly understood by the player.
Event Flag (FLAG)	A Boolean value that begins as false. It flips to true when the player has reached some point in the game to activate each FLAG. This is used to keep track of what points in the game the player has reached.
Health Points (HP)	The amount of damage the player can take before “dying” and losing the game. The player will be shown a “game over” screen upon dying.
Inventory Management System (INV)	The collection of items that the player gathers over time throughout the game.
Equipped Items (EQUIP)	The collection of items that the player is currently wearing.
Game Progress (PROGRESS)	The collection of event flags the player has activated throughout the game.

1.4 REFERENCES

[1] Geagea, Sarah. "Software Requirements Specification, Amazing Lunch Indicator." 2017. PDF file.

1.5 OVERVIEW

The entire document contains three chapters. The first chapter introduces the system as well as defined terms that should to ease interpretation of information throughout the document.

In addition, the second chapter bestows an important overview of the systems functions and interactions. This chapter also depicts the player and their interactions with the system. The system will have robust constraints and assumptions regarding the product.

Furthermore, the third chapter contains detailed requirements specifications. This chapter describes the various system interfaces that are required to allow the product to be used properly by the player. The requirements are specifically detailed, these detailed descriptions are aided with visuals. These requirements include attributes and features.

2. OVERALL DESCRIPTION

This section will give an overview of the entire system. An explanation will be given of the system and its basic functions and interactions. The type of player that will use the system is described and which functions they are able to have. This is also the section in which constraints and assumptions will be known.

2.1 PRODUCT PERSPECTIVE

The Citadel of Storms is intended for any gamer, which should be a person aged 12& above. This product is intended to appeal to adventure gamers of either gender. This is an independent, self-contained text-based game system. This text-based game is placed on a computer, where text parsers translate the player's input into available commands. A text file will ensure the storage and retrieval of the player's information. The documentation and design will facilitate expansion in the future.

2.2 PRODUCT FUNCTIONS - LUKAS

On start-up, the player will be able to create an account or log into an existing one using a username and password. They will then be able to start a new game or load a save file if one exists for their account. From the start of a new game, the player will be given a textual description of their character's situation. They will then be placed in the starting room. From here the player will be able to navigate the map as they wish.

Beating the game requires the player to defeat the Sorcerer, who is in a room that can only be accessed if the player has four key fragments. While playing, the player will come across puzzles, monsters, and items while traveling between rooms.

The player will be able to interact with riddles and get a hint for each riddle. Upon solving, the player will be rewarded with an item. Failed riddles can be reattempted up to a cap, after which it will cost the player gems to reattempt.

The player will be able to engage in combat with monsters, where they will be able to attack and defend against monsters. The player will lose the game if their HP reaches 0 during combat and win an item if appropriate when the monster's HP reaches 0. The player will also be able to attempt to flee combat.

With a particular monster, the merchant, the player can choose to use the shop to buy and sell items.

The player will be able to interact with items in a variety of ways, such as get description, pick up, drop, equip, unequip, use, buy and sell. Items should only have appropriate action attached to them.

2.3 USER CHARACTERISTICS - LUKAS

There will only be one user of the system called the player. They will interact with the game's interface to play the game and attempt to win.

2.4 CONSTRAINTS (MATTHEW)

The system is constrained to user input from the computer keyboard.

2.5 ASSUMPTIONS AND DEPENDENCIES (MATTHEW)

The assumption is made that the program will be running on a system with free resources (RAM, storage, etc.).

2.6 APPORTIONING OF REQUIREMENTS (MATTHEW)

If the project is delayed, some features will be delayed until a secondary release.

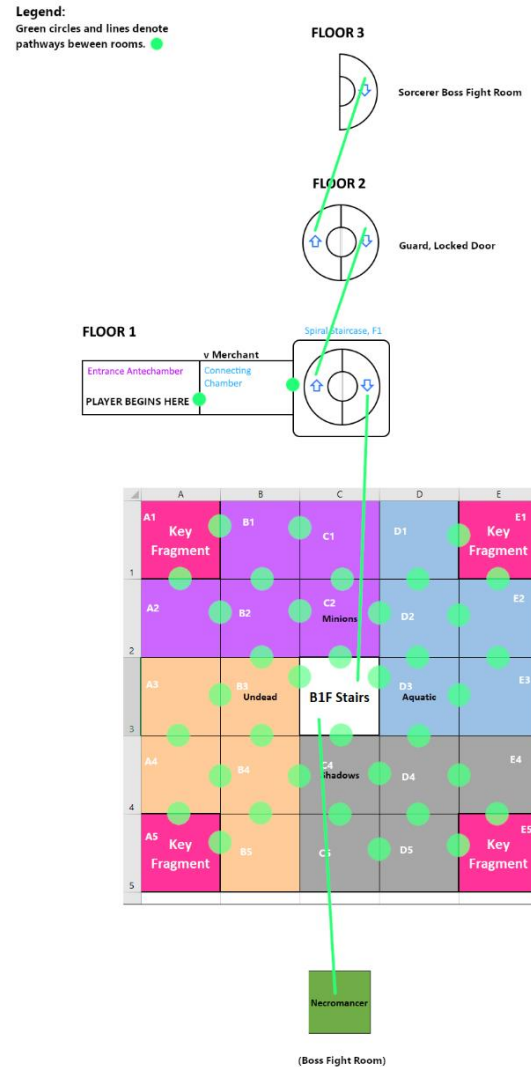
- Merchant (Monster) – trading feature
- Necromancer (Monster) – boss fight
- User Interface - visual map display

3. SPECIFIC REQUIREMENTS

3.1 OVERALL GAME DESCRIPTION

The game map is split into a few different floors. Players will follow a short introductory path, then have the chance to explore the entirety of the dungeon any way they choose.

- The player begins the game in **Entrance Antechamber**, upon Floor 1. This is where the opening dialogue will be read.
- They move along to the **Connecting Chamber**, where they encounter the *Merchant* for the first time, and learn a bit about the layout of the tower.
- They proceed to the **Spiral Staircase** room, and have a choice of either going up or down along the stairs. Going up leads to Floor 2; down leads to **B1F Stairs** and the true beginning of the dungeon at large.
- *Inspecting* in **B1F Stairs** allows the player to find a secret trapdoor, which is an additional exit. It leads down to the Necromancer's boss room.
- The lower floors are laid out in a grid system, as depicted in the diagram at right. For example, the location of **B1F Stairs** is C3.
- Puzzle locations are fixed; contents of treasure chests are randomly assigned. (see [3.1.3 Riddles](#))
- Chance of monster appearance is based on room type.
- When the sorcerer has been defeated, a new dialogue will be displayed (see [3.1.8 Dialogue](#)) allowing the player to make a choice between keeping the amulet or destroying it. The difference is only thematic – the player has won the game.



3.1.1 ROOMS

Room ID	Room Type	Puzzles/ Items/ Etc	Room Description	Exits	
A2	Minion		There is an eerie feeling in the room. The air is muggy. With every step you take another stream of sweat comes down your face. You initially see a few pig people. There is a dim fire in the corner, you can see the shadow of a chest. There are a few pigs standing around a table. There seems to be a carcass on the wall.	N – A1 E – B2	N - A doorway that flickers softly in changing colors. E – A door with a locking mechanism. Good thing it's broken.
B1	Minion		A cool breeze goes down your back. The pig people seem to be sleepwalking – they are moving in a daze. Seems as if gliding past them is an option. There appears to be nothing of use in the room... except, there is a back pack on the floor, a skeleton, and a few barrels of god-knows-what.	W – A1 S – B2 E – C1	W - A door hedged by purple runes. S – This wooden door with deep gouges. It moves with a creak. E – The stains in this wood... is it blood?
B2	Minion		The door falls open, a gust of wind comes in the room, and the candles mounted against the walls flames flicker. Stomachs are growling: the pig people are on the prowl. A smell of desperation is in the air. The closest object seems to be a crate; there could still be something in there. There is a tool bench, as well as a work table. This room is filled with opportunity – or defeat.	N – B1 W – A2 S – B3 E – C2	N - This wooden door with deep gouges. It moves with a creak. W - A door with a locking mechanism. Good thing it's broken. S – The air behind this door smells different. You aren't sure if this is good or bad. E – A bit stuck, but with a rough push, the door moves.
C1	Minion		This room appears to be cluttered with crates, barrels and shelves. They seem to be empty at a first glance, but the amount of furniture in this room is discomfoting. This sneak attack is not so sneaky.	W – B1 S – C2	W - The stains in this wood... is it blood? S – Another day, another door. You wish you had a map.

C2	Minion		Every candle is lit. A desk lies ahead with tools for a scribe. There are two bunkbeds as well as a chair. This must have been where someone rested... or continues to rest. The only way to find out is to tread ahead.	N – C1 W – B2 S – C3 E – D2	N - Another day, another door. You wish you had a map. W - A bit stuck, but with a rough push, the door moves. S – Odd, the door does not match the frame. Who decorated this place? E – Mold growth on the handle. Yuck.
A3	Undead		There is a stench of blood that reeks from a mile away. There are blood stained walls, and spotty places on the floor with built up gunk. The gunk appears to have things in it. What can of things? Let's scavenge and find out. BUT be careful the undead are lurking.	S – A4 E – B3	S – A skull shaped knob. Oh wait, it's an actual skull. E – A severed hand still grips tight to the handle. You try not to think about it.
A4	Undead		A sight for sore eyes, the undead are ravaging a minions' carcass. What a monster-eat-monster world this is. There must have been a combat between them, there are a couple of weapons on the floor. Disturbing them during the feast may be fatal.	N – A3 S – A5 E – B4	N - A skull shaped knob. Oh wait, it's an actual skull. S - A door smeared across its lintel with dried blood. Claw marks are seen, scratches upon the frame. E – A message carved into the door... "Die!" How lovely.
B3	Undead		This room looks like its smaller in size, but the gunk on the walls is incredibly thick. Oh no the undead are awakening from the walls. Will you have time to explore the room or will you just die. Put up a fight.	N – B2 W – A3 S – B4 E – C3	N - The air behind this door smells different. You aren't sure if this is good or bad. W - A severed hand still grips tight to the handle. You try not to think about it. S – You're starting to question the skull aesthetic all these door frames have. E – The door flies open with a gentle push. Startled, you wonder if you are strong, or the door is weak.

B4	Undead		How peculiar, a dusty work table with beakers and tubes. Was this some kind of work area for the sorcerer at some point? There are quite a few items to inspect. Recognize this analysis was done in peace and quiet... but when are the undead ever quiet? Tread lightly!	N – B3 W – A4 S – B5 E – C4	N - You're starting to question the skull aesthetic all these door frames have. W - A message carved into the door... "Die!" How lovely. S – This door has a spear ran straight through it. Opening and walking through is very awkward but you manage. E – This door feels especially cold.
B5	Undead		Ready for combat, the undead are projecting their vile without warning or warrant. There must be a chest in here, the stakes are too high, but when do monsters ever play by the rules. A winner takes risks, you choose your fate. Explore the room, there is a barrel, mirror, and a crate at first glance.	N – B4 W – A5	N - This door has a spear ran straight through it. Opening and walking through is very awkward but you manage. W - A half-destroyed metal door hangs from the hinges. It looks as if something very large had crashed against it from the inside.
D1	Aquatic		Stepping through the door, you're hit with a humid fungal stench. The room before you is square and flooded with water. Moving forward from the door you walk down submerged steps until you're waste high in the filthy pool.	S – D2 E – E1	S - Something about this door seems... fishy. Nope, just the smell. E - A doorway that is shaped like a ridged clamshell, with the flat base resting upon the floor.
D2	Aquatic		Mold grows on the walls just above the water that fills the room, which is still like a corpse. There are probably a few hidden beneath these waters. You hope that you do not join them.	N – D1 W – C2 S – D3 E – E2	N – Something about this door seems... fishy. Nope, just the smell. W - Mold growth on the handle. Yuck. S – A fish head ornament hangs from this door. You wonder if it will start talking. E – The air is damp, the handle is slimy, and the door is heavy. Maybe a prison isn't that bad.
D3	Aquatic		The cold in the air has not stopped the growth of fungal life here. You wonder if this flooding was intentional or	N – D2	N - A fish head ornament hangs from this door. You wonder if it will start talking.

			just the result of neglect. Perhaps you should hurry and just get through this lest you contract some awful disease.	W – C3 S – D4 E – E3	W – The door knob is a bit finicky and takes some effort to get working. S – A chill strikes you as you grab the handle. Best to keep moving. E – A lot of fish died to make this door frame.
E2	Aquatic		Foulness that one would have to smell to believe enters your nostrils. Resisting the urge to wretch, you look around the dank room to see a chest. Perhaps there is something of use here after all.	N – E1 W – D2 S – E3	N - A doorway outlined in the bodies of dried starfish and spiral shells. W - The air is damp, the handle is slimy, and the door is heavy. Maybe a prison isn't that bad. S – What looks like an eel has been drawn on the wooden door.
E3	Aquatic		Rotting fish carcasses float in the water that fills this room. Maybe you should turn back. At the very least you visit here should be quick, you think to yourself.	N – E2 W – D3	N - What looks like an eel has been drawn on the wooden door. W - A lot of fish died to make this door frame.
C4	Shadow		(If no lantern description) Stepping through the door, you feel a chill. The room is pitch black. Perhaps you may find a light elsewhere. (If lantern description) A room with no natural light of its own illuminated by your lantern. Yet, even the lanterns warmth cannot take the edge off the chill you feel.	N – C3 W – B4 S – C5 E – D4	N – The handle on this door is an actual knife. You open it carefully. W - This door feels especially cold. S – It's unreal how dark this door is. You can't tell what material it's made of even when you touch it. E – The words, "Leave now!" are scrawled in what you believe is dried blood. Fun.
C5	Shadow		(If no lantern description) Stepping through the door, you feel a chill. The room is pitch black. Perhaps you may find a light elsewhere.	N – C4 E – D5	N - It's unreal how dark this door is. You can't tell what material it's made of even when you touch it.

			(If lantern description) These dark rooms are not so scary with a lantern in hand. At least, as far as you can tell. If only your lantern was as warm as it was bright.		E – A layer of frost seems to cover this door. Is it getting colder?
D4	Shadow		<p>(If no lantern description) Stepping through the door, you feel a chill. The room is pitch black. Perhaps you may find a light elsewhere.</p> <p>(If lantern description) Claw marks litter the wall almost with the same frequency as bones litter the floor. Something feeds here, and you quietly hope it is not home.</p>	<p>N – D3 W – C4 S – D5 E – E4</p>	<p>N - A chill strikes you as you grab the handle. Best to keep moving.</p> <p>W - The words, "Leave now!" are scrawled in what you believe is dried blood. Fun.</p> <p>S – A chalk pentagram has been placed on this door., but a giant gouge cuts through it. A broken seal it would seem.</p> <p>E - The runes in this door are very unfamiliar to you. You hope they are just for show.</p>
D5	Shadow		<p>(If no lantern description) Stepping through the door, you feel a chill. The room is pitch black. Perhaps you may find a light elsewhere.</p> <p>(If lantern description) A chest sits in the center of this room. Surely your lantern will stay lit long enough for you to open it...</p>	<p>N – D4 W – C5 E – E5</p>	<p>N - A chalk pentagram has been placed on this door., but a giant gouge cuts through it. A broken seal it would seem.</p> <p>W - A layer of frost seems to cover this door. Is it getting colder?</p> <p>E - Dark: The faint outline of a doorway can be made out within the shifting darkness. There's not much else you can see...</p>
E4	Shadow		<p>(If no lantern description) Stepping through the door, you feel a chill. The room is pitch black. Perhaps you may find a light elsewhere.</p> <p>(If lantern description) You notice something peculiar in the room. The air smells strongly of iron. Listening carefully, you hear... dripping?</p>	<p>W – D4 E – E5</p>	<p>W - The runes in this door are very unfamiliar to you. You hope they are just for show.</p> <p>E - Light: A plain stone doorframe is set in the wall, opening a path to another room beyond. Shadows seem to crawl along the edges.</p>

Unique Room	Items	Enemies	Description	Exits
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A1	Key Fragment 1	Guard	(As you enter the chamber, your attention is drawn to the far corner, where a hulking form breathes softly.)	E	B1	A door hedged by purple runes.
			On the floor around you lie the discarded bodies of once-living minions. Is this where all these experiments came to a head?	S	A2	A doorway that flickers softly in changing colors.
E1	Key Fragment 2	Guard	Wading quietly through the water, you enter a room that has a more foreboding atmosphere than you've felt in a while. The walls drip slowly with water and green ooze, and small splashes can be heard echoing about in the otherwise still air. (In the far corner, a somber form appears to be sizing you up.)	W	D1	A doorway that is shaped like a ridged clamshell, with the flat base resting upon the floor.
				S	E2	A doorway outlined in the bodies of dried starfish and spiral shells.
A5	Key Fragment 3	Guard	Peeking slowly around the doorframe, you edge cautiously into this room. It reeks of rotting meat, and there are pools of vile fluids scattered here and there upon the floor. (A pair of glowing red eyes stares you down from the far corner, but do not make any motion. Yet.)	E	B5	A half-destroyed metal door hangs from the hinges. It looks as if something very large had crashed against it from the inside.
				N	A4	A door smeared across its lintel with dried blood. Claw marks are seen, scratches upon the frame.

E5	Key Fragment 4	Guard	Dark: You can't see much here, but you sense the shadows gathering even stronger in this room. A chill runs inadvertently down your spine. (A pair of red eyes suddenly blinks from the far corner, watching you intently.)	W	D5	(Both doorways share these same descriptions.) Dark: The faint outline of a doorway can be made out within the shifting darkness. There's not much else you can see...
			Light: This room is furnished with a decrepit lounge chair and suede sofa, and might actually look quite cozy, were it not for the ambient shadows still stealing around the corners of your vision. (In the far corner, a silent sentinel leans against the wall, following your every move.)	N	E4	Light: A plain stone doorframe is set in the wall, opening a path to another room beyond. Shadows seem to crawl along the edges.
Entrance Antechamber	N/A	N/A	A portcullis has been shut behind you. You remember the glare of the town guards as they left you to your fate, such a short time ago. The only way to proceed is deeper within the tower.	E	Connecting Chamber	
Connecting Chamber	N/A	Merchant	This room is quiet, but the sound of the sea lapping at the shore outside still permeates the walls. In the corner lurks a funny little man, who grins at you. That's strange - everyone here was supposed to be dead.	W	Entrance Antechamber	
				E	F1 Spiral Staircase	
F1 Spiral Staircase	N/A	N/A	You arrive at a large, marble staircase, winding upward and downward into the unknown. From below, you can faintly hear a collection of strange noises - from	Up	F2 Spiral Staircase	

			above, only the faint grunts as of someone winded.	Down	B1F Stairs	
F2 Spiral Staircase	N/A	Guard	From your vantage point, you can see the entrance chamber of the tower beneath you through a narrow window. The rain whirls outside still. Above you is a large door, with a peculiar shape engraved where a handle might normally be. (A large suit of armor with red eyes stares you down menacingly, but does not yet move to attack.)	Up	F3 Spiral Staircase	
				Down	F1 Spiral Staircase	
F3 Spiral Staircase	Sorcerer's Pendant	Sorcerer	You enter the room cautiously. Around you lie various items of magical creation, but your attention is drawn to the crystal coffin in the room's center. Dare you approach?	Down	F2 Spiral Staircase	
B1F Stairs	N/A	N/A	So, the rumors were true. A labyrinth of rooms seems to extend from where you now stand, each of them having a different sense of danger to the others. Your journey is far from over.	N	C2	
				S	C4	
				W	B3	
				E	D3	
Necromancer's Room	Necromancer's Staff	Necromancer	This room is as still as the grave. Eerie green mist slowly rises up the walls. On the far wall, you see the remnants of bodies lashed to the walls. This place	Up	B1F Stairs	

			reeks of death, and staying here too long could spell doom.			
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3.1.2 MONSTERS

Monster Name	Room Location	Items Drops (Drop Chance)	Armor	Health	Can Attack?	Can Defend?	Special Move	Description
Necromancer	B2F	Summoning Staff (100%) 20 – 25 Gems (100%) First Aid Kit (100%)	None	18	No	No	Summon: Creates an undead and loses 1 health. Player can attack either the Necromancer or the undead. Attack Description: The mage slices its mummified hand and lets blood drip on the ground before him. Seemingly from nowhere, an undead arises.	A hooded figure, with the stench of death about it. The tattered purple robe it wears is stained countless times with dried blood. With a quiet coughing laugh, it beckons you forward.
Sorcerer	Floor 3	Sorcerers Pendant (100%)	None	20	Yes	Yes	HOT THUNDER - regular attack that ignores armor. Description: Hit with a piercing blow, you stagger backwards. The air crackles...	Robes clean, eyes dull, the sorcerer gives you a cursory glance and no more. Turning back to his work, he says quietly, "You must be strong to have bested Fredrick." Satisfied with his work, he turns back to you. With a bored expression, he continues, "However... you will find that strength is a relative term."
Merchant	Floor 1 Connecting Chamber	999 Gems (100%) Silver Pipe (100%)	Heavy	12	Yes	Yes	Pilfer: The player takes 2 damage and loses 3 – 7 gems.	A homely little goblin... or is it an orc? A demon? A silvery metal pipe in hand, and well armored. It sees you and jingles a bag of gems before directing your attention to its wares. His intentions may be

		Heavy Armor (50%) First Aid Kit (90%)					Description: A grazing blow, yet the merchant smirks. Your pockets feel lighter and you realize his true intent.	ill, they do not seem to lethal at least. Money is everyone's friends in times like these.
Pig Person	B1, C1, A2, B2, C2	Light Armor (50%) Pitch fork (50%) 5 – 10 gems (100%) First Aid Kit (25%)	Light	8	Yes	Yes	None	Like the pig men of folk tales meant to scare bad children, but these abominations prove far uglier than any mother could have imagined. A pitch-fork in hand, they seem to be even deadlier as well.
Fish person	D1, D2, E2, D3, E1	Cutlass (50%) 5 – 10 gems (100%)	Light	8	Yes	Yes	Drown: The player is “pulled underwater” and will take 1 damage each time they perform an action until the end of combat.	Looking at its scaly, up turned face, you're not quite sure what the fish is thinking. It clarifies this by drawing its cutlass and walking towards you.

							Description: Your foe dives under the surface. Moments later, it pulls you down as well.	
Shadow Fiend	C4, D4, E4, C5, D5	4 – 8 Gems (100%)	None	7	Yes	No	None	<p>(With light item) These shadows do not dance to the flicker of your flame. A black mass emerges from the ground with what look like.... Claws?</p> <p>(Without light item) The eerie moans you hear are not those of any creature living or dead. Even in darkness you can feel somethings presence. Perhaps, you think, it would be best to turn back.</p>
Undead	A3, B3, A4, B4, B5	3 – 6 Gems (100%)	None	4	Yes	No	<p>Infect:</p> <p>A passive effect of the undead's attack. There is a 30% chance for the player to become "infected", which will cause the player to take one damage when they perform any action until the end of combat.</p> <p>Description: You stagger from the undead's blow, even though it was was not very forceful. You feel unwell.</p>	Flesh rotting and falling from bone. What horror is this? The shambling corpse seems to have taken an interest in you. Best take the time to dissuade it.

Guard	A1, E1, A5, E5, Floor2	Heavy Armor (50%) Axe (50%) 8 – 12 Gems (100%) First Aid Kit (100%)	Heavy	11	Yes	Yes	Cripple: Does damage equal to 75% of the guard's weapon damage. The players next attack will deal half damage.	Tall, bulky, and well plated, the guard looks at you as though you were no more than a mere trifle. Readyng his axe, the look on his face is almost like a dare.
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3.1.3 RIDDLES

Every riddle unlocks a treasure chest. These chests contain various items that will be very helpful along your journey. The player will have three attempts to answer a riddle, but beware – spending too much time may allow a monster to get you by surprise. Riddles must be entered in text form. A hint is attached to each riddle, and if that does not help the player there is a way to have unlimited attempts – if you have unlimited gems. Gems are the form of currency that can be used to extend attempt limits. The player has 3 free tries to solve a riddle – after this, they must pay an increasing gem amount.

Riddle ID	Riddle	Hint	Answer
R1	You might have to flip me upside down, even wiggle me a bit, and I am the only thing that can help you cross the threshold. What am I?	I am made from nickel silver	Key
R2	Transcribe: 66678387	keypad	Monster
R3	What can you put in a wooden box to make it lighter?	How does a boat sink fastest?	Holes
R4	I never rest, I'm constantly moving, I follow you, your every move. What am I?	I scare children	Shadow
R5	I have keys, but no locks. I have a space, but no room. You can enter, but you can't go outside. What am I?	Where are your hands located as you type?	Keyboard
R6	I have seas with no waters, coasts with no sand, towns without people and mountains with no land. What am I?	This is one of the tools that you were provided with at the beginning of the game.	Map
R7	Imagine you are in a dark room. How do you get out?	Emphasis on "imagine"; it's not real.	Stop
R8	What room can no one enter?	I am a vegetable.	Mushroom

3.1.4 ITEMS

Items can be found scattered around the dungeon's lower floor. Sometimes they will be in treasure chests; at other times they will be dropped as loot from defeated enemies.

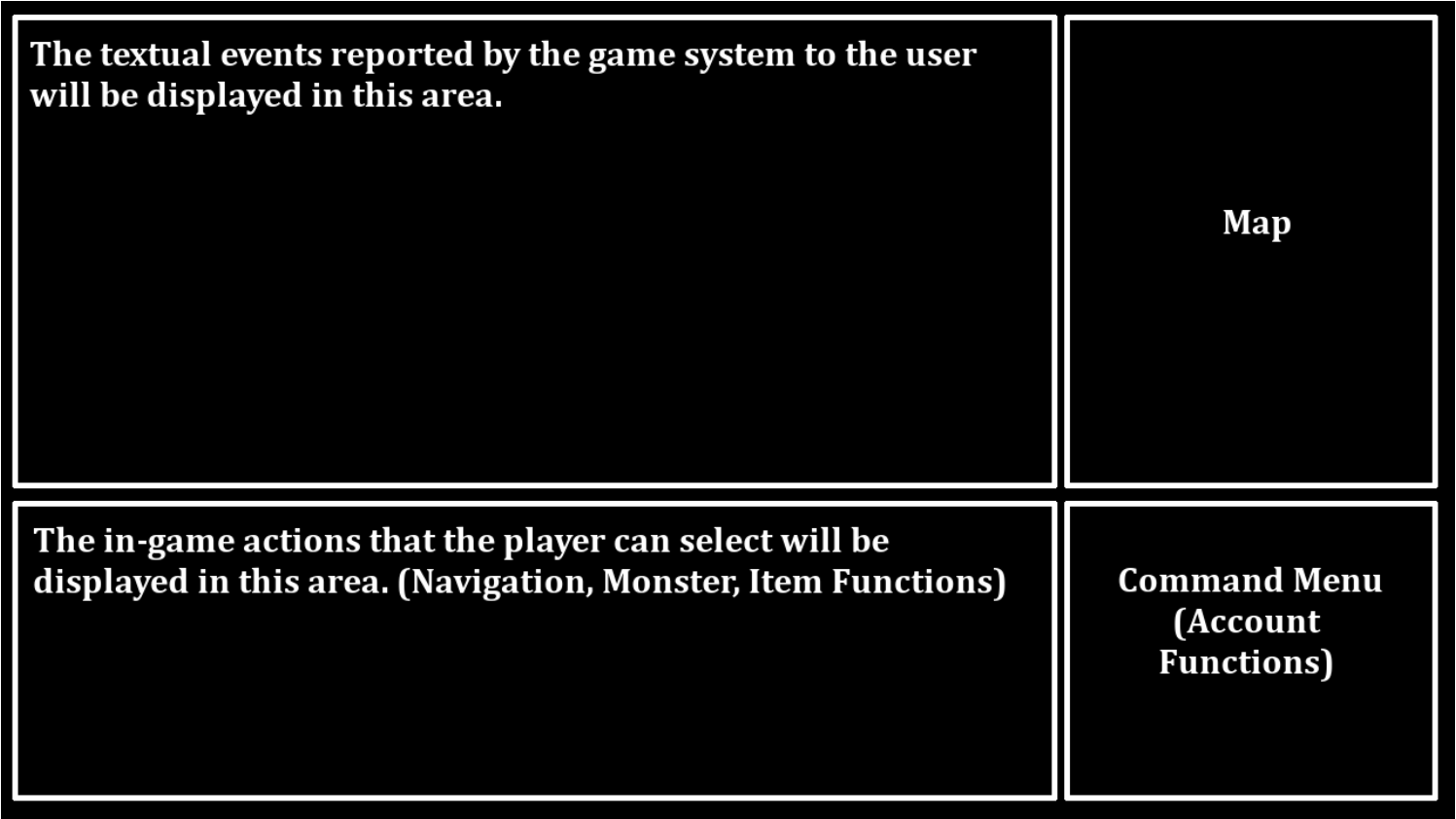
Weapons and Key Items are the only two categories that cannot be stackable.

Artifact Category	Artifact Name	Artifact ID	Artifact Description	Artifact Room ID	Character compatibility	Value (gems)	Stackable
Weapon	Cutlass	W1	Sword	D1,D2,D3,E2,E3	Aquatics, Player	3	No
Weapon	Axe	W2	Axe specialized for combat	A1,A5,E1,E5	Guards, Player	3	No
Weapon	Halberd	W3	Combined spear and battle-axe	Floor3	Top Guard, Player	5	No
Weapon	Silver Metal Pipe	W4	Common material found in dungeon	Connecting Chamber	Merchant, Player	20	No
Weapon	Pitchfork	W5	Common agricultural tool	A2, B1, B2, C1,C2	Minions, Player	1	No
Weapon	Dagger	W6	Stabbing weapon	ALL	Player	1	No
Weapon	Toxic Vomit	W7	Projectile blood	A3,A4,B3,B4,B5	Undead, Player	0	No
Armor	Prisoner Gear	A1	Clothes to cover up, does not protect	ALL	Player	5	Yes
Armor	Leather Armor	A2	Protects from some damage	ALL	Player	12	Yes
Armor	Chain Mail Armor	A3	Protects from some damage	ALL	Player	25	Yes
Armor	Bronze Plate Armor	A4	Virtually no damage	ALL	Player	35	Yes
Armor	Steel Armor	A5	Virtually no damage	ALL	Player	50	Yes

Device	Crystal Ball	D1	Tells you where you can find chests	ALL	Player	8	Yes
Device	First Aid Kit	D2	Restores full health	ALL	Player	10	Yes
Device	Boomerang	D3	Takes you back to the previous connecting chamber	ALL	Player	10	Yes
Device	Holy Water	D4	To cure infection from the undead	ALL	Player	12	Yes
Device	Lantern	D5	Shadows don't attack in dark rooms	ALL	Player	500	Yes
Device	Elixir	D6	Gives you gills makes you stronger for a time period	ALL	Player	30	Yes
Device	Boar's Head	D7	Put it on and blend in with minions so they don't attack	ALL	Player	2	Yes
Key Item	Key	KI1	To unlock sorcerer tower there's four pieces that you must find and it will piece together when at his door	A1,A5,E1,E5	Player	N/A	No
Key Item	Staff	KI2	Available once necromancer is defeated. Allows undead to attack on each of your turns during battle	Basement	Necromancer, Player	2000	No
Key Item	Sorcerer Pendant	KI3	Available once Sorcerer is defeated. Holds power to end curse	Floor3	Player	N/A	No
Key Item	Chest	KI5	Contains different items such as weapons, devices, and armor	ALL	Player	N/A	No
Currency	Gems	C1	Gems can be found in every chest, They can be used to buy artifacts from merchant, They can be used in puzzles once player has hit attempt limit	ALL	Player	1	Yes

3.1.5 USER INTERFACES

We will be using a textual interface to display information to the player, and to receive commands from the player to affect system features.



3.1.6 COMMANDS

The player has a list of commands to move around the map, and additional interactions which may become available when other objects are present in the room.

Name	Subcommand	Action	Availability
Go	North, South, East, West, Up, Down	These commands are linked to the respective Navigation feature below.	When there are valid rooms around the player. This is available always, except for when the player is engaged in combat. The player must first attempt to “flee” (see further down this table).
Inspect	[object to inspect]	If no object is specified, the player will be shown the room’s description again. If there is a valid object in the room with the same name as entered in the command, the player will be shown the item’s description.	Always.
Attack	[object to attack]	The player attacks with their currently-equipped item.	When there are monsters in the same room as the player.
Inventory	Equip, Drop	The inventory screen opens for the player to view and equip items.	Always.
Use	[object to use]	The player ‘uses’ a certain item that they have in their inventory. For example, a potion or a set of bandages.	Always.
Flee	N/A	The player attempts to flee from battle.	When engaged in battle.
Solve	N/A	The player is shown the puzzle’s riddle and a screen to select the proper answer.	When nearby a puzzle, AND no monsters are in the same room.
Abandon	N/A	The player abandons solving a puzzle.	When attempting to solve a puzzle.
Hint	N/A	The player is shown a hint for the current puzzle.	When attempting to solve a puzzle.

3.1.7 NAVIGATION

The player has a navigation command to move around rooms in the map, a way to inspect doors they may encounter, and move between floors.

Name	Subcommand	Action	Availability
Go	North, South, East, West, Up, Down	The player will move to the room in the specified direction. If there is no available room, throw an error.	When there are valid rooms around the player. This is available always, except for when the player is engaged in combat. The player must first attempt to “flee” (see further down this table).
Navigate		The player must be able to choose a direction to navigate so that they may exit their current room.	Always.
Inspect		The player must be able to select this command in order to re-read the room description.	Always.

3.1.8 DIALOGUE

Dialogue is shown to the player at a few specific events, triggered by an event flag (FLAG).

Identifier	Event Flag	Dialogue Content
BEGIN	The player begins the game.	Your home seaside village has been plagued by endless storms for an entire month. Many call it a curse. Imprisoned unjustly, you are given a chance to earn your freedom by infiltrating the tower on an island apart, where a powerful sorcerer once lived. There, perhaps, is aid.
NECRO	The player initiates combat with the Necromancer.	In the dim center of the dank room before you, there is movement. (See Necromancer description, 3.1.2 Monsters)
SORC	The player inspects the crystal coffin in room F3 Spiral Staircase.	You gingerly push the lid of the coffin open. Instead of a decaying skeleton, you find a healthy, sleeping body. Its eyes open, and you tumble backward, unnerved. The body rises silently and steps out of its place of rest. (See Sorcerer description, 3.1.2 Monsters)

END	The player defeats the sorcerer.	<p>With the power of the sorcerer’s amulet, you feel knowledge flood your mind and your fingers sizzle with energy. You know how to break the curse, now... but doing so will require you to destroy this very amulet. You can see great wonders that can be worked with this power – the ability to raise up an even greater tower, to build a mighty kingdom to stand the test of time.</p> <p>(The player is given a selection box, with the options of “destroy” or “keep”.)</p> <p>(If selected “destroy”) The temptation is great, but passes in a moment. Almost with a sigh, your hand closes upon the amulet involuntarily, crushing it much easier than expected into a fine whispering dust. The curse is broken, and you will soon receive your reward at home.</p> <p>(If selected “keep”) You place the amulet about your neck, your mind instantly overtaken by the maddening screams of spirits trapped within. You feel old, very old, and tired. You must rest soon, but there is work to be done. There is a new sorcerer in town – and so, the cycle begins anew.</p>
MERCH1	The player encounters the merchant for the first time.	“Heh. Hehe. Another one... you’ll never make it. Not without travelling to the four corners of this little world.” The small man grins, eerily. He shakes his coat off a bit and points to the wares spread on a table before him. “Bring me gems. Gems for goodies. Hehe.”
MERCH2	The player encounters the merchant at any time other than the first encounter.	“You have gems? You get goodies. Or, I’ll buy your goodies... hehe.”

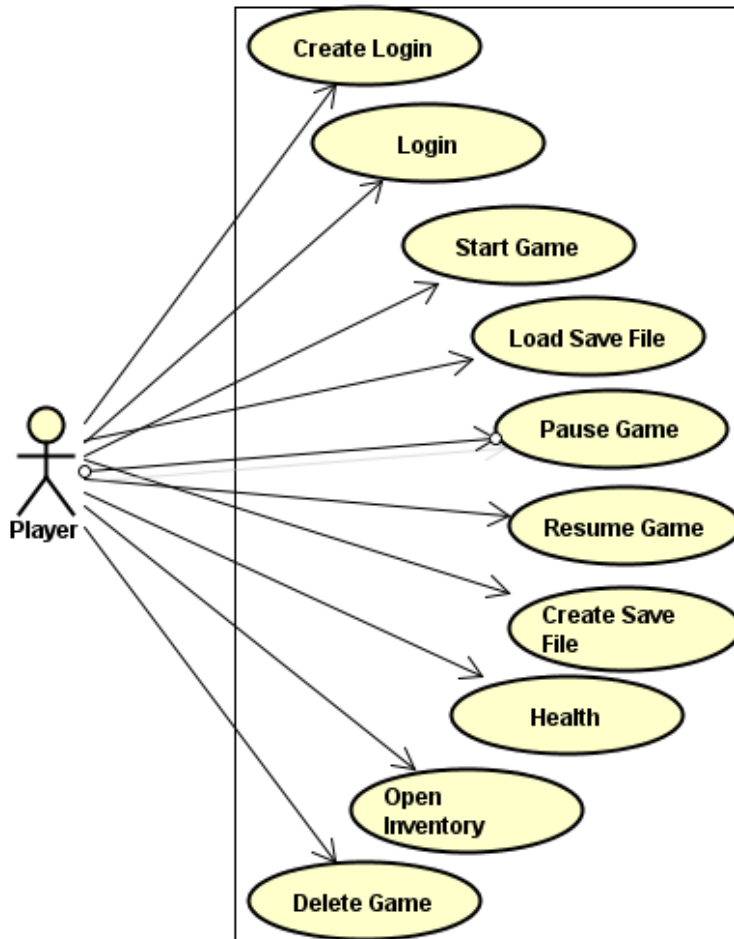
3.1.9 PLAYER ATTRIBUTES

Attribute Name	Abbreviation	Description
Health Points	HP	The amount of damage the player can take before “dying” and losing the game. The player will be shown a “game over” screen upon dying.
Inventory Management System	INV	The collection of items that the player gathers over time throughout the game.
Equipped Items	EQUIP	The collection of items that the player is currently wearing.
Game Progress	PROGRESS	The collection of event flags (FLAG) the player has activated throughout the game.

3.2 SOFTWARE PRODUCT FEATURE

3.2.1 COMMAND MENU FEATURE

USE CASE DIAGRAM



PURPOSE

The player will be able to use commands.

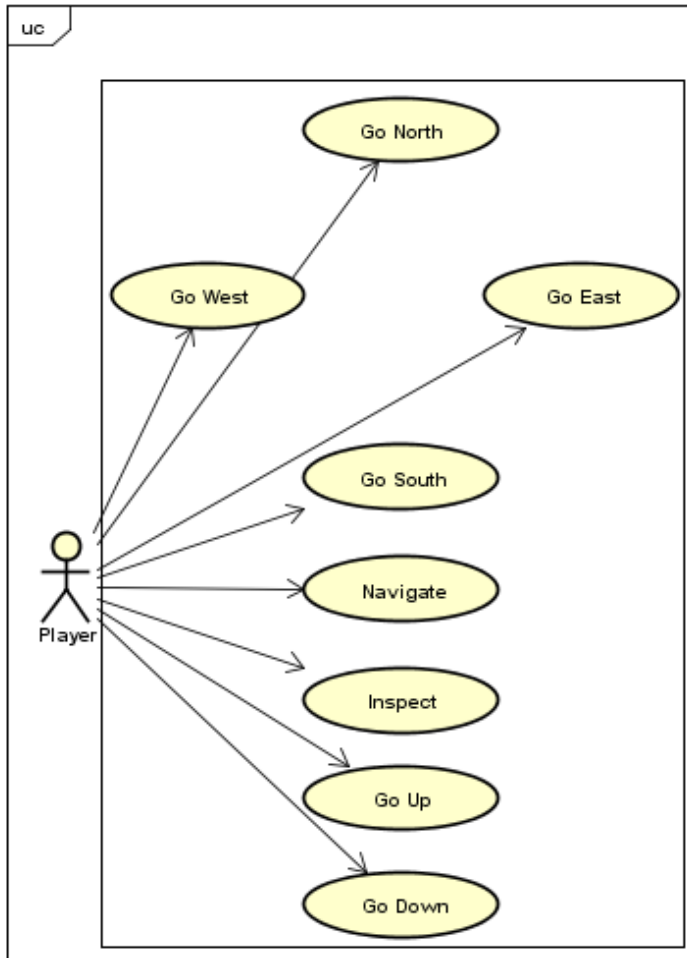
ASSOCIATED FUNCTIONAL REQUIREMENTS

ID	Title	Description	Dependencies
SAV1	Create Save File	The player must be able to create a save file in order to save their data if they wish to return to the game at a later time.	SAV9
SAV2	Load Save File	The player must be shown a list of usable save files and then be able to select a file from the list. The selected file should then be loaded into game memory. If there are no save files, then a message should appear instead stating, "No save files found."	SAV9 SAV1

SAV3	Delete Save File	The player must be able to delete an existing save file. They will be shown an additional confirmation message to select “Yes/No” before the file is deleted.	SAV9 SAV1
SAV4	Resume	The player should be able to un-pause the game from the command menu.	SAV5
SAV5	Pause	The player should be able to pause the game from the command menu.	
SAV6	Login	The player must enter a username and password from an existing account in order to play the game.	SAV9
SAV7	Open Inventory	The player should be able to open their inventory from the command menu.	
SAV8	Health	The player should always be able to see a visual representation of their character’s health.	
SAV9	Create Login	The player must make an account with a user name and password in order to play the game.	

3.2.2 NAVIGATION FEATURE

USE CASE DIAGRAM



PURPOSE

This feature allows the player to navigate among rooms within the game. Individual rooms are listed within the rooms table ([3.1.1 Rooms](#)).

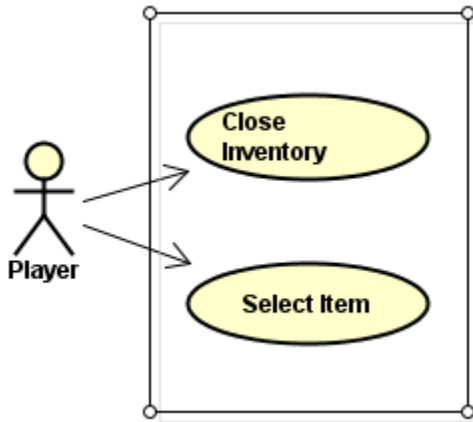
ASSOCIATED FUNCTIONAL REQUIREMENTS

ID	Title	Description	Dependencies
NAV1	Navigate	The player must be able to choose a direction to navigate in order to exit their current room.	
NAV2	Inspect	The player must be able to select this command in order to re-read the room description.	
NAV3	Go North	The player will travel to the room North of their current room. This function should only be available if there is a room North of the current room.	NAV1

NAV4	Go South	The player will travel to the room South of their current room. This function should only be available if there is a room South of the current room.	NAV1
NAV5	Go East	The player will travel to the room East of their current room. This function should only be available if there is a room East of the current room.	NAV1
NAV6	Go West	The player will travel to the room West of their current room. This function should only be available if there is a room West of the current room.	NAV1
NAV7	Go Up	The player will travel to the room above of their current room. This function should only be available if there is a room above of the current room.	NAV1
NAV8	Go Down	The player will travel to the room below of their current room. This function should only be available if there is a room below of the current room.	NAV1

3.2.3 INVENTORY FEATURE

USE CASE DIAGRAM



PURPOSE

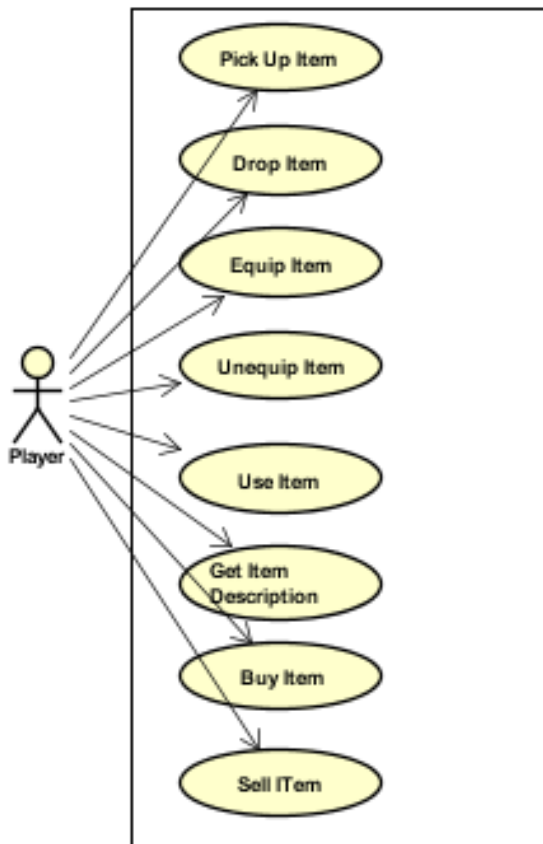
This feature tracks all the player’s equipment & currency (gems) and will allow the player to manage equipped gear and weapons. Items of the same type “stack” (add to existing count).

ASSOCIATED FUNCTIONAL REQUIREMENTS

ID	Title	Description	Dependencies
INV2	Close Inventory	The player must be able to use this command to select an item within INV and remove it from INV.	SAV7
INV3	Select Item	The player should be able to move up and down through the list of items in their inventory, with the currently selected item being highlighted.	SAV7

3.2.4 ITEM FEATURE

USE CASE DIAGRAM



PURPOSE

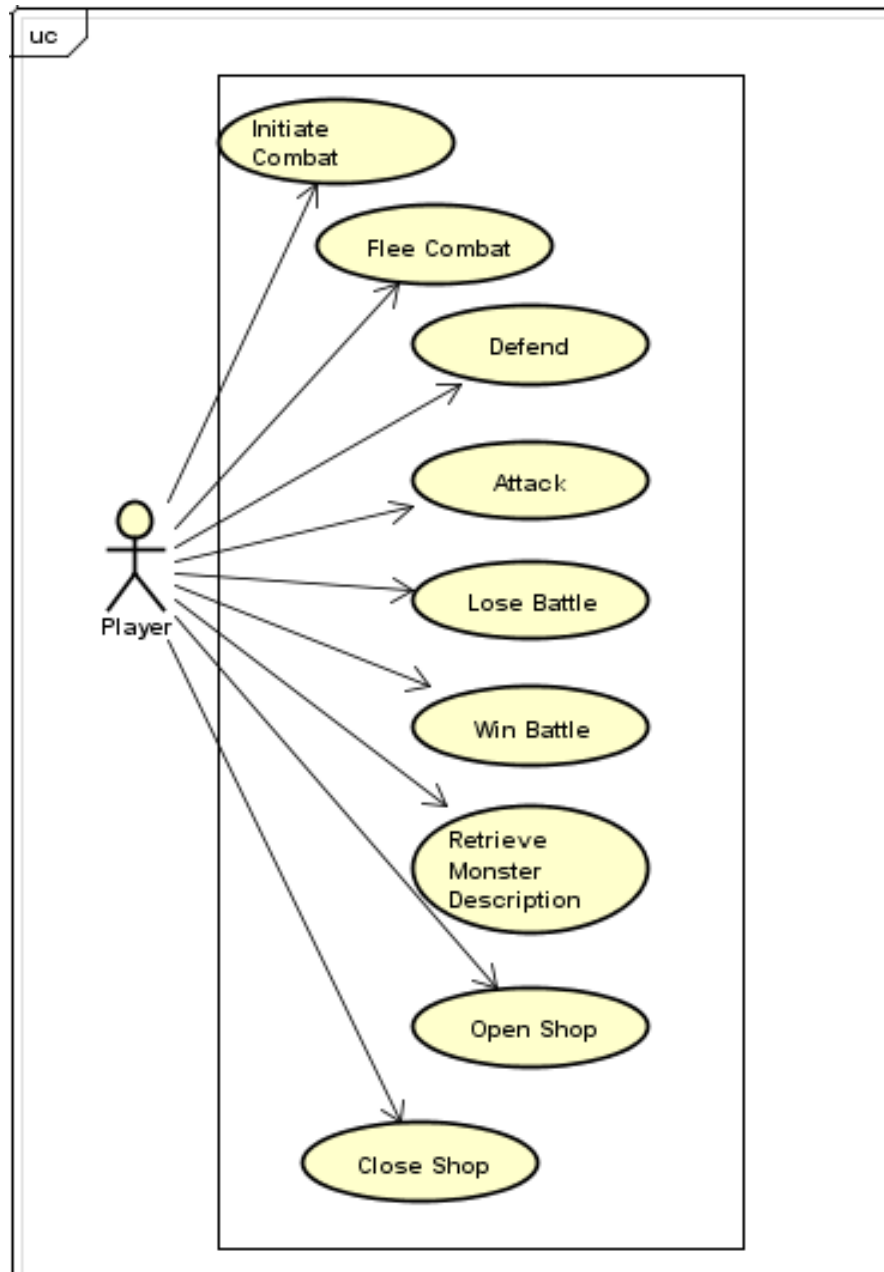
This feature describes the uses for items within the game. Individual items are listed within the items table [\[3.1.4 Items\]](#).

ASSOCIATED FUNCTIONAL REQUIREMENTS

ID	Title	Description	Dependencies
ITM1	Pick Up	The player must be able to use this command to pick up an item from within a room and add it to INV.	
ITM2	Drop	The player must be able to use this command to select an item within INV and remove it from INV.	INV 1
ITM3	Equip	The player must be able to select an item within INV and add it to the appropriate equipment slot. If there is already an item in the slot, the currently item should be unequipped and moved to the INV.	INV 1
ITM4	Unequip	The player must be able to unequip items from equipment slots and add them back to INV.	ITM 3
ITM 5	Use	The player should be able to use the item if appropriate. This should only work for devices and key items, with devices be removed from the player inventory after use.	INV 1
ITM 6	Get Description	The player must be able to get a description of the currently selected item.	
ITM 7	Buy	The player should be able to buy items for the item cost listed in the item table. This will remove the item from the player INV and place it in the merchant INV.	
ITM 8	Sell	The player should be able to sell items for half the item cost listed in the item table (rounded down if number is not whole). This will remove the item from the merchant INV and place it in the player INV.	INV 1

3.2.5 MONSTER FEATURE

USE CASE DIAGRAM



PURPOSE

- Combat is initiated either when the player attacks a monster, or a monster attacks the player. Combat is resolved by trading attacks until one entity dies or flees successfully.
- The player has a certain small “pool” of *health points* (HP): 20. The player’s current health persists throughout the game – if the player is injured in one fight, their HP drops, and they must find a method of healing for it to increase again. The player heals naturally over time: each time the player moves into a new room without engaging in combat or being injured, their HP increases by 1, up to its maximum.

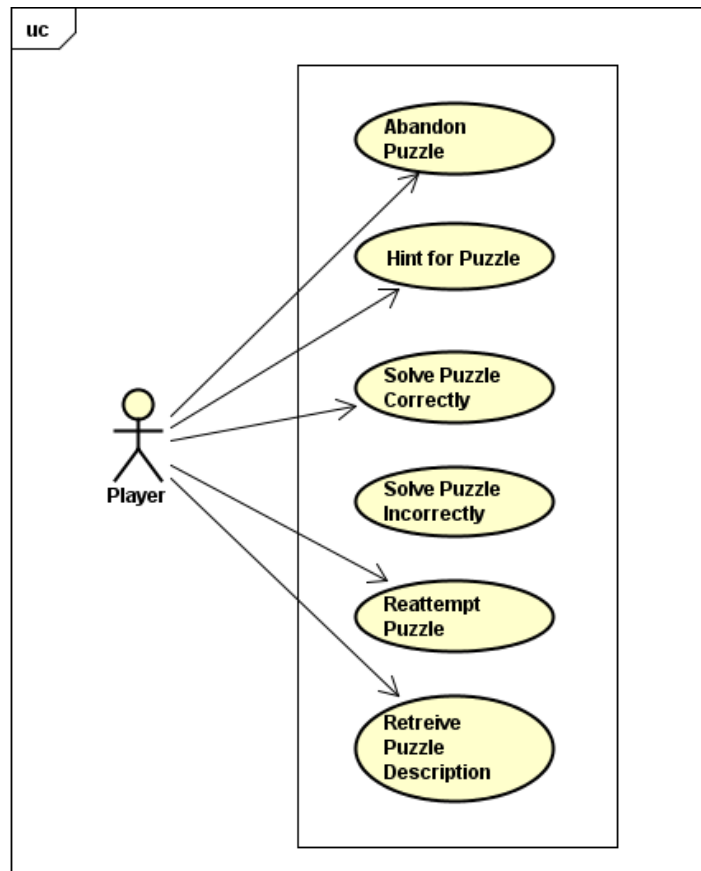
- Damage in combat is based on equip-able items by each combatant member. Refer to the items table for specific values ([3.1.4 Items](#)).
- In combat, monsters that are not bosses or guards have a certain chance to attack, defend, or flee. Guards and bosses can attack or defend, but not flee.
- For monsters that flee from combat: fleeing is triggered when the monster is at 15% or lower HP. They will make 1 attempt to flee, but if it fails, they will begin to attack again.

ASSOCIATED FUNCTIONAL REQUIREMENTS

ID	Title	Description	Dependencies
MON 1	Attack	The player should be able to use an action to damage the monster with the damage value being based on the weapon the player has equipped.	MON 3
MON 2	Defend	The player should be able to use an action to reduce the damage value of the monsters next attack.	MON 3
MON 3	Initiate Combat	The player should be able to enter a fight with a monster, which will update the available commands with appropriate combat commands.	
MON 4	Flee Combat	The player should be able to attempt to leave combat if they are currently in combat. This will be chance-based and take an action to do. The monster will get one chance to attack: if this attack hits, damage is dealt and the flee attempt fails.	MON 3
MON 5	Get Monster Description	The player should be able to get a textual description of the monster. (This does not cost an “action” of combat for the player?)	
MON 6	Lose Fight	The player should lose the game when their HP reaches 0, which can only occur during combat.	MON 3
MON 7	Win Fight	The player should be able to end a fight by dropping the HP of the monster they are fighting to 0. They will then be rewarded with drops if appropriate.	MON 3
MON 8	Open Shop	The player should be able to open the shop menu when interacting with the appropriate monster (merchant). This command will not be available if they have ever initiated combat with the merchant.	
MON 9	Close Shop	The player should be able to close the shop while they are in the shop menu.	MON 8

3.2.6 RIDDLE FEATURE

USE CASE DIAGRAM



PURPOSE

This feature describes the riddles within the game for the player to solve. Individual items are listed within the items table ([3.1.3 Riddles](#)).

ASSOCIATED FUNCTIONAL REQUIREMENTS

ID	Title	Description	Dependencies
RDL 1	Answer	The Player should be able to enter an answer to the riddle that will be checked by the system. The check should not be case dependent and only check for proper spelling.	RDL 2
RDL 2	Get Description	The player should be able to get the riddle description.	
RDL 3	Hint	The player should be able to get the hint description for the specific riddle they are currently interacting with.	RDL 2
RDL 4	Abandon	The player should be able to leave the riddle regardless of whether or not they solve the riddle.	RDL 2

3.3 SOFTWARE SYSTEM ATTRIBUTES

The requirements in this section specify the required reliability, availability, security, and maintainability of the software system.

3.3.1 RELIABILITY

- (Matthew) The system should not crash when a user is playing the game. Errors should be handled appropriately without disrupting the user's enjoyment.
- (Karen) The system should properly load save files that have only been modified by the system.
- (Lukas) The system should be able to load appropriate textual descriptions upon request.

3.3.2 AVAILABILITY

- (Matthew) The system should notify the user if hardware limitations prevent the game from running.
- (Karen) The system should be available within two minutes of action.
- (Lukas) The system should be save files within 5 seconds of request.

3.3.3 SECURITY

- (Matthew) The system should display the last time a save file was modified.
- (Karen) The system should only allow a user to play the game only after the user has successfully logged in.
- (Lukas) The system should only allow a user to use save files associated with their account.

3.3.4 MAINTAINABILITY

- (Matthew) An issue tracker should remain active for a few months after the product release in order to fix reported bugs.
- (Karen) The system should be able extend in the future which would allow new functions.
- (Lukas) The item system should allow for new items to be added at a later date.