*An Endless Night*

Software Requirement Specification

**Draft 1**

*September 19, 2016*

Team Cobra



**Revisions**

|  |  |  |  |
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# **1 - Introduction**

This section provides the overall scope description of the project. The purpose is to list all the terminology and abbreviations described and defined for this document.

## **1.1 Purpose**

The purpose of this document is to give detailed information of the requirements for “An Endless Night” standalone software. The document provides detailed descriptions of the system’s constraints, interactions between the user and interfaces of the system or other known external applications. This document acts as a contract to meet the approval of the client.

## **1.2 Scope**

“An Endless Night” is a text-based game for the purpose of having people play and enjoy. The application is a free to download for any operating system that has latest java jre installed.

Players are able to traverse a game with multiple rooms per floor that can contain a monster or a puzzle to solve. A player must traverse through each room and the system tracks the score depending on monsters defeated and puzzles solved. The end goal is to reach the last room. Administrators are able to change the contents and aspects of the game.

**1.3 Definitions, Acronyms, and Abbreviations**

|  |  |
| --- | --- |
| **Term** | **Definition** |
| SRS | Software Requirements Specification |
| Text Game | A video game that utilized text characters instead of images and vector graphics. |
| Player | The user that interacts with the game. |
| Administrator | The person who has permissions to manage and control the game. |
| Monster | Antagonist of player. |
| Room | A space that can be occupied by one or more entity or object. |
| Puzzle | An obstacle for the player to solve with logic decisions or mathematically. |
| Item | An object or a unit that can be part of a list of collection. Can be used by player. |
| Room | A space that contains entities, objects, or activities that can be accomplished for the purpose of reaching a specific goal. |
| HP | Player’s health points. |
| Equipment | A supply process to someone with an item for a particular purpose. |
| Standalone | A device is able to function independently of other hardware. This means it is not integrated into another device. [1] |
| Jar file | A file that contains the [class](http://whatis.techtarget.com/definition/class), image, and sound files for a [Java](http://searchsoa.techtarget.com/definition/Java) application or [applet](http://searchsoa.techtarget.com/definition/applet) gathered into a single file and possibly compressed. [2] |
| Java | A high level programming language used to create applications. |
| JDK | Java Development Kit |
| JRE | Java Runtime Environment |
| SDK | Software Development Kit |
| Save | A digitally stored information about the progress of a player. |
| Load | A digitally stored information to continue the progress of a player. |
| Command Menu | A user interface to interact with other entities and objects in a game. |
| Score | A number to keep track of a player’s progression that will vary on specific events or activities triggered.. |
| Stats | A numeric representation of the player’s health and attack attributes. |
| Inventory | A container to store a collection of items. |
| Futon | A Japanese quilted mattress rolled out on the floor for use as a bed. |
| Shinto | A Japanese religion dating from the early 8th century and incorporating the worship of ancestors and nature spirits and a belief in sacred power in both animate and inanimate things. |
| Tatami Mats | A rush-covered mat forming a traditional Japanese floor covering. |
| Shoji | A door, window or room divider consisting of translucent paper over a frame of wood which holds together a lattice of wood or [bamboo](https://en.wikipedia.org/wiki/Bamboo). |

## **1.4 References**

[1] Christensson, P. (2006). *Standalone Definition*. Retrieved 2016, Sep 7, from <http://techterms.com>

[2]Margaret, R.(2005). *JAR file (Java ARchive)*. Retrieved 2016, Sep 7, from <http://www.theserverside.com/definition/JAR-file-Java-ARchive>

## **1.5 Overview**

Following this introduction, there are two remaining sections and a prioritization of the requirements. The second section describes the system’s overall functionality and how it will interact with other systems. This section also includes the system constraints, assumptions and dependencies, and the apportioning of requirements. Additionally, details about who will interact with the system, and how, will be covered here.

The final section discusses, in detail, the specific system requirements. This will also include interfaces for the system. The features of the product, and their purpose, along with specific performance requirements, design constraints, system attributes, and database requirements are covered in this section as well.

# **2 - Overall Description**

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of stakeholders that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

## **2.1 Product Perspective**

The system will be a standalone product and it’s core functionality is to enable users to play the game. This application will not utilize a database to store the game’s data due to limited resources, instead the data is stored into text files for the system to have access to read and write files. A constant internet connection is not required by the system with the exception when downloading the software.

## **2.2 Product Functions**

The major function that the software will perform are saving, loading, and command menus. The saving function will record the user progress and the loading function will allow the use to load their current save. The command menus are to help the user to progress in the system.

## **2.3 User Characteristics**

There will be two people whom will interact with the system, the users and the admins. Each of these people will have a different kind of use to the system.

The user/player is only allowed to use the system. While the admin has more privilege access to the system to test and change the source code of the system.

## **2.4 Constraints**

The software is constrained of requirements of other software such as an updated java jre to be able to execute. Since this is a text-based game based of the English language, it is recommended that the player has a basic understanding and knowledge of the language beforehand.

## **2.5 Assumptions and Dependencies**

## **No possible assumptions.**

## **2.6 Apportioning of Requirements**

Functional requirements must be prioritized and implemented before their respective deadline has passed. Performance requirements should also be implemented by their respective deadline, but in the event that a delay is necessary, that requirement should be implemented within a future version.

# **3 - Specific Requirements**

This section should describe all software requirements at a sufficient level of detail for designers to design a system satisfying the requirements and testers to verify that the system satisfies requirements.

## **3.1 Overall Game Description**

Provide a detailed description of your game to the implementing team including:

**Title**: An Endless Night

**Theme**: Japanese Shinto Mythology

**Player**: You are one of the Samurai helping a group of priests to purify the demons living in the mountain castle

**Story**: On the way to the mountains, the lead priest saw a large building and decided to take a rest. The lead priest knocked on the gate. As the gate opened a woman appeared. The lead priest politely requested a place for him and his companions to stay for the night. The woman smiled slyly and lead the priest and his companions inside quietly. Suddenly, the gate closed behind them and they were surrounded by demons. The priests and the Samurai fought back, but they were outnumbered. They tried opening the gate, but it won't budge. Their only choice then was to fight as they scour through the building...

**Stats:** The player base stats starts with 100 health points and 5 attack points.

**Goal**: Escape the building and purify all demons.

**Score**: Results and score will vary based on game play. Score will be calculated based on time to complete main goal, number of monster defeated, puzzle attempts, player deaths, and number of artifacts gained by the end of game.

**Game design**: A large building surrounded by a garden and giant walls

- Floor 1 contains 18 rooms

- Floor 2 contains 10 rooms

- Floor 3 contains 2 rooms

- Each room can contain a sub-room of about 0-2 rooms

o All rooms must have at least 1 puzzle or monster

* Some rooms can contain a trap or fake puzzles (player can be ambushed by monster)
* May contain key items to help player
* Monster can sometimes drop healing items and/or equipment
* Rooms can be emptied or have some items/treasure to help player
* Some room require some key items to go into (required from completing puzzles/ defeating certain monster).
  + The user should not require to use the key item or solve again to re-enter the room

### **3.1.1 Rooms****https://lh5.googleusercontent.com/iC7-qpH76Q40I22saM2zPBeZEQR7i01VX1eQBNnNDW8N1ESPV0I-KHkBwXTVk7BRbhVpBLjhozbBiWcyxZMKdQ9ljqS_D9lmQBdf3bHw12eAd9L9xM5pEXemh3EeR6gQfrpGfAwk**Floor 1 - 18 Rooms

**ROOM TABLE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Unique ID** | **Room Name** | **Description** | **Artifacts(ID)** | **Creatures(ID)** | **Puzzles(ID)** | **Doors(ID)** |
| **Rm\_00** | Main Hallway | Large Hallway with wooden floors and pillars, |  | Mon\_01 OR Mon\_05 |  | D\_01(Front Door)  D\_06(T)  D\_13(East)  D\_22(Wash)  D\_25(K)  D\_27(D)  D\_29(West)  D\_F1(Stairs) |
| **Rm\_01** | South Garden | The entrance garden, it contains a few trees and hydrangea flowers. |  | Mon\_01 OR Mon\_02 OR Mon\_06 |  | D\_00(Main Gate)  D\_01(Front Door)  D\_02(SW)  D\_03(SE)  D\_05(SE-Sb) |
| **Rm\_02** | West Garden | A plain garden with bamboo trees. | Art\_08 | N/A | Puz\_01 | D\_02(SW)  D\_17(NW-Sa)  D\_19(NW)  D\_29(West) |
| **Rm\_03** | North Garden | A garden with a small pond filled with lotus flowers |  | Mon\_01 OR Mon\_02 OR Mon\_06 |  | D\_14(NE)  D\_16(NE-Mb)  D\_18(NW-Sb)  D\_19(NW)  D\_20(Back Door A)  D\_21(Back Door B) |
| **Rm\_04** | Northeast Garden | A garden normally used an outside training, it has a cherry blossom tree in the middle. |  | Mon\_01 OR Mon\_02 OR Mon\_06 |  | D\_08(NE-TH)  D\_11(NE-SH)  D\_14(NE)  D\_15(NE-Ma) |
| **Rm\_05** | Southeast Garden | A garden with beautiful stone and plant arrangement |  | Mon\_01 OR Mon\_02 OR Mon\_06 |  | D\_03(SE)  D\_04(SE-Sa)  D\_07(T-SE Garden)  D\_09(SE-TH)  D\_12(SE-SH) |
| **Rm\_06** | Northwest Shed | Many tools lie here, most of them are used to care for the gardens. There’s a ladder here. | Art\_16 | Mon\_01 OR Mon\_02 |  | D\_17(NW-Sa)  D\_18(NW-Sb) |
| **Rm\_07** | Southeast Shed | Multiple tools that are used to care the garden and a bucket. | Art\_04 | N/A | Puz\_02 | D\_04(SE-Sa)  D\_05(SE-Sb) |
| **Rm\_08** | Moon viewing Deck | Beautifully crafted deck, looks like a gazebo. It has the best view of the moon. | Art\_01 | Mon\_01 OR Mon\_02 OR Mon\_06 |  | D\_15(NE-Ma)  D\_16(NE-Mb) |
| **Rm\_09** | Tea Room | Tables are clothed with fine materials and everything is neatly placed. | Art\_05 | Mon\_01 OR Mon\_03 |  | D\_06(T)  D\_07(T-SE Garden) |
| **Rm\_10** | Wash Room | A room before then outdoor bath. Guest and travelers here wash themselves before bathing. |  | Mon\_01 OR Mon\_04 |  | D\_22(Wash)  D\_23(Toilet)  D\_24(Bath) |
| **Rm\_11** | Toilet | An unexpected clean room. |  | Mon\_01 OR Mon\_04 |  | D\_23(Toilet) |
| **Rm\_12** | Outdoor Bath | An outdoor bath, it looks like someone recently used it. | Art\_09 | Mon\_01 OR Mon\_02 OR Mon\_04 OR Mon\_06 |  | D\_24(Bath) |
| **Rm\_13** | Dining Room | A small table lies in the middle of the room. The room is large enough to fit two big families. | Art\_11 | N/A | Puz\_04 | D\_20(Back Door a)  D\_26(KD)  D\_27(D) |
| **Rm\_14** | Kitchen | Many baskets lay around with fruits in them. On the table is a knife and some red meat. | Art\_12 | Mon\_01 OR Mon\_03 |  | D\_25(K)  D\_26(KD)  D\_28(KP) |
| **Rm\_15** | Pantry | A small room used to store foods to last one winter. Contains a lot of closed baskets of food. | Art\_14 | Mon\_01 OR Mon\_03 |  | D\_28(KP)  D\_TrapDoor(TD) |
| **Rm\_16** | Small Hallway | A hallway with 2 doors and 2 wooden steps, not really interesting here. |  | Mon\_01 OR Mon\_05 |  | D\_10(SH-TH)  D\_11(NE-SH)  D\_12(SE-SH)  D\_13(East) |
| **Rm\_17** | Training Hall | A large training hall to practice kendo. The floors are clean and there is an odd smell. | Art\_13 | N/A | Puz\_03 | D\_08(SE-TH)  D\_09(NE-TH)  D\_10(SH-TH) |

**DOOR TABLE**

|  |  |  |
| --- | --- | --- |
| **Unique ID** | **Door Name** | **Description** |
| **D\_00** | Main Gate | An enormous bolted plated gate, seems strong enough against an army of a thousand. |
| **D\_01** | Front Door | A wooden door beautifully crafted held by iron hinges. |
| **D\_02** | South West Garden Door (SW) | A stone path leading to a small wooden gate |
| **D\_03** | South East Garden Door(SE) | A stone path with hydrangea flowers |
| **D\_04** | South East Shed Door a (SE-Sa) | A worned sliding door made of wood. |
| **D\_05** | South East Shed Door b (SE-Sb) | A worned sliding door made of wood. |
| **D\_06** | Tea Door A (T) | A solid white sliding door with flower design |
| **D\_07** | Tea Door B(T-SE Garden) | A white shōji |
| **D\_08** | Training Hallway Door C (NE-TH) | A perfectly intact shōji |
| **D\_09** | Training Hallway Door B(SE-TH) | A plain shōji |
| **D\_10** | Training Hallway Door A (SH-TH) | A very worn out shōji, seems like it's been used quite frequently. |
| **D\_11** | (NE-SH) | A small wooden step |
| **D\_12** | (SE-SH) | A small wooden step |
| **D\_13** | East | A sturdy wooden sliding door |
| **D\_14** | North East Garden door (NE) | A small wooden bridge built over a small pond |
| **D\_15** | Moon Door A (NE-Ma) | Four wooden steps that leads to the moon deck. |
| **D\_16** | Moon Door B (NE-Mb) | Four wooden steps leading to the moon deck. |
| **D\_17** | Shed NW Door A (NW-Sa) | A rugged sliding door made of wood. |
| **D\_18** | Shed NW Door B  (NW-Sb) | A worned sliding door made of wood. |
| **D\_19** | Northwest Garden Door (NW) | A path surrounded with bamboo trees |
| **D\_20** | Backdoor A | A worned down shōji. |
| **D\_21** | Backdoor B | A less worned down shōji. |
| **D\_22** | Wash Door | A old wooden sliding door |
| **D\_23** | Toilet Door | A rugged wooden Sliding door |
| **D\_24** | Bath Door | A solid Wooden Sliding door |
| **D\_25** | Kitchen Door(K) | A thicker layer paper held by wooden frames. It’s another sliding door... |
| **D\_26** | Kitchen Diner Door(KD) | A sliding door with paper so thin it’s almost transparent covered by wooden frames to hold it. |
| **D\_27** | Diner Door(D) | A sliding door with wooden frames that hold a thicker layer of paper to keep insulation and sound from coming out. |
| **D\_28** | Pantry Door(KP) | A sturdy wooden sliding door separating the kitchen and pantry which is locked from the inside. |
| **D\_29** | West | A transparent sliding door that separates the main hallway to the west garden. You can see the garden clearly. |
| **D\_F1** | 2nd floor stair | A broken and unusable staircase leading from the 1st floor to the 2nd floor. |
| **D\_TD** | Servant Closet Trap Door(TD) | A trap door leading from the servant closet to pantry. |

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**ROOM TABLE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Unique ID** | **Room Name** | **Description** | **Artifacts(ID)** | **Creature(ID)** | **Puzzles(ID)** | **Doors(ID)** |
| **Rm\_18** | Dojo Roof | A vast view of the outside the castle with a hallway that splits the two gardens. |  | Boss\_01 |  | D\_30(E-roof) |
| **Rm\_19** | Servant Room | An L-shaped room with at least a quarter of the room taken up for an unnecessarily big closet... |  | Mon\_01 OR Mon\_07 |  | D\_38(S)  D\_39(SC) |
| **Rm\_20** | Servant Closet | The closet is big enough that it could be mistaken for another guest room. Clothes are hanged and multiple dressers are on the mats. On the wall facing south hangs a sword like weapon. You noticed a trap door underneath the tatami mats and a string attached... | Art\_02 | N/A | Puz\_07 | D\_39(SC)  D\_TrapDoor(TD) |
| **Rm\_21** | Guest 1 Room | A considerable medium size room with tatami mats and a neatly placed futon in the middle against the west wall. |  | Mon\_01 OR Mon\_07 |  | D\_34(G1)  D\_37(G1-G2) |
| **Rm\_22** | Guest 2 Room | The second guest room is a smaller sized room compared to the guest room to make room for the closet. The layout is the same with a futon on top of tatami mats. |  | Mon\_01 OR Mon\_07 |  | D\_35(G2)  D\_36(G2C)  D\_37(G1-G2) |
| **Rm\_23** | Guest 2 Closet | A small room, small in width and the length is long. It’s able to hold a dozen of clothes for guests that plans to stay for more than a few weeks. |  | Mon\_01 OR Mon\_08 |  | D\_36(G2C) |
| **Rm\_24** | Bedroom | A luxurious bed in the middle of the room. The wall contains some decorative ornaments and beside that is a closet door. |  | Boss\_02 |  | D\_32(B)  D\_33(BC) |
| **Rm\_25** | Bedroom Closet | A small room enough to fit two adults. It contains some clothes. | Art\_03  Art\_10 | Mon\_01 OR Mon\_08 |  | D\_33(BC) |
| **Rm\_26** | F2 Hallway | An enormous hallway that leads to multiple rooms: servant, guests, bedroom, study room, and a roof that leads outside on top of the dojo. |  | Mon\_01 OR Mon\_07 |  | D\_30(E-roof)  D\_31(SR)  D\_32(B)  D\_34(G1)  D\_35(G2)  D\_38(S)  D\_F1(Stairs)  D\_F2(Stairs) |
| **Rm\_27** | Study Room | The largest room on floor 2. It contains multiple pages lying on the ground with a table and some books. It looks like a mess. | Art\_11 | N/A | Puz\_06 | D\_31(SR) |

**DOOR TABLE**

|  |  |  |
| --- | --- | --- |
| **Unique ID** | **Door Name** | **Description** |
| **D\_30** | E-Roof | A windowed sliding door, clear and transparent with no locks. |
| **D\_31** | Study Room Door(SR) | An extravagant abstract door, it is very detailed but it seems to be locked. |
| **D\_32** | Bedroom Door(B) | A shoji with windowed pane rice paper with a tree design. The wood frame is made of fine bamboo and the color black. |
| **D\_33** | Bedroom Closet Door(BC) | A shoji with no panes just solid wood. The color is dark brown and it slides from right to left, nothing spectacular. |
| **D\_34** | Guest 1 Door(G1) | Nothing seems to be of interest, the door is very bland fitting for a guest. |
| **D\_35** | Guest 2 Door(G2) | A very bland door with some minor scratches. |
| **D\_36** | Guest 2 Closet Door(G2C) | A sliding door that made of wood, that’s it. |
| **D\_37** | Guest 1 - 2 Door(G1-G2) | A slight thin papered sliding door held by a wood frame separates the two guest rooms. |
| **D\_38** | Servant Room(S) | A sliding door with an intricate design, looks like spider webs. |
| **D\_39** | Servant Closet(SC) | A sliding door made of wood, there is a thick insulated layer of paper between the frames to keep the noise out. |
| **D\_F1** | 2nd floor stair | A broken and unusable staircase leading from the 1st floor to the 2nd floor. |
| **D\_F2** | Observatory stair | Staircase leading from the 2nd floor to the observatory. |
| **D\_TD** | Servant’s Closet Trap Door(TD) | A trap door leading from the servant closet to pantry. |

### https://docs.google.com/drawings/d/sp-nh0eHDIES3qFbmF4vHGQ/image?w=380&h=427&rev=312&ac=1

### Floor 3 - 2 Rooms

**ROOM TABLE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Unique ID** | **Room Name** | **Description** | **Artifact List(ID)** | **Creature List(ID)** | **Puzzle List(ID)** | **Door(ID)** |
| **Rm\_28** | Observatory | A large, circular, room with large windows and instruments to view the heavens. | Art\_07 | N/A | Puz\_05 | D\_40  D\_F2 |
| **Rm\_29** | F3 Balcony | A large open platform protruding from the back of the house, with a bamboo railing of intricate lattice work. | N/A | Boss\_03 | N/A | D\_40 |

**DOOR TABLE**

|  |  |  |
| --- | --- | --- |
| **Unique ID** | **Door Name** | **Description** |
| **D\_40** | Balcony Door | A locked door that leads to the balcony. The material is made of steel and the hinges are iron coated in jet black. The design is a dragon-like spread across the door. The aura around the door is dark and ominous. |
| **D\_F2** | Observatory stair | Staircase leading from the 2nd floor to the observatory. |

### **3.1.2 Monsters**

The monsters within the game are mythological creatures derived from Japanese folklore, collectively known as “youkai”.

**Common Enemies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Unique ID** | **Name** | **Description** | **Attack(s)** | **Strength** | **HP** | **Probability** | **Drop(s)** |
| **Mon\_01** | Maneki-neko | A porcelain cat with treasure inside. Not truly a monster, with only 1 HP and harmless to the player. | N/A | 0 | 1 | 1% | Art\_05 (10%) AND/OR Art\_14 (60%) AND/OR Art\_15 (30%) |
| **Mon\_02** | Karakasa | A ghost that takes form of a paper umbrella, with one eye and a tongue at the top, and a leg for its stem. | Tongue-attack | 3, with a 20% chance of immobilizing the player for one turn | 15 | 30% | Art\_05 (15%) |
| **Mon\_03** | Futakuchi-onna | A creature that resembles a normal woman, with long hair that hides a monstrous second mouth on the back of her head | Bite attack | 5 | 25 | 40% | Art\_05 (15%) |
| **Mon\_04** | Kappa | A turtle-like goblin creature that pranks humans and enjoys eating cucumbers. They have a cavity at the top of their head that stores water, which is their life source. | Water blast | 8 | 35 | 30% | Art\_05 (15%) |
| **Mon\_05** | Tanuki | A raccoon-dog creature that can shapeshift in order to fool people. It will be disguised as a random common enemy upon encounter, retaining the properties and attacks of that enemy until the player reduces half of its HP, or uses the Magic Mirror item on it. It will then reveal its true form and attack the player with a flurry of tree leaves that are razor-sharp. | Mimic attack (While disguised)  Leaf flurry (When revealed) | Mimic attack: Dependent on the monster disguise  Leaf flurry: 10 | 40 | 40% | Art\_05 (20%) |
| **Mon\_06** | Yatagarasu | A three-legged crow associated with divine intervention. It can fly in the air to avoid the player’s attacks for one turn and then swoop down to strike the player the following turn. | Sky dive | 8 | 25 | 20% | Art\_05 (15%) |
| **Mon\_07** | Oni | An ogre/troll-like creature with horns protruding from their head. | Iron club attack | 15 | 60 | 50% | Art\_05 (25%) |
| **Mon\_08** | Shisa | A lion-like dog creature from Okinawan mythology. When its mouth is open, It can breathe fire at the player. | Fire-breath | 18 | 70 | 50% | Art\_05 (30%) |

**Boss Enemies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Unique ID** | **Name** | **Description** | **Attack(s)** | **Strength** | **HP** | **Probability** | **Drop(s)** |
| **Boss\_01** | Tengu | A fast avian demon with long, beak-like noses. They wield feathered fans that stir up powerful winds and can sweep the player out of the battle and off of the dojo roof, into either the NE Garden or the SE Garden (50% chance of either Garden) The player must have heavy boots equipped to brace the winds. | Gust of wind  Fan-swipe | Gust of wind: N/A, forces the player out of battle and off the dojo roof without the boots. Player is sent to either NE Garden (50%) or SE Garden (50%). With the boots, the attack does 10 damage  Fan-swipe: 15 | 65 | Only one in the game, 100% | Art\_14 x5 (100%) AND Art\_05 (100%) AND Art\_17 (100%) |
| **Boss\_02** | Kitsune | An intelligent fox spirit that can shapeshift into a human to tempt people. It grows a new tail for every 100 years that it has lived, up to nine total. It will appear disguised as the woman from the beginning of the story and will appear in the bedroom of the 2nd floor, attempting to convince the player that they can rest easy to restore HP. Unlike the Tanuki enemy however, it is immune to the Magic Mirror item; The player must rely on gut instinct that something isn’t right. If the player sees through the trick and disagrees three times for each dialogue prompt, the kitsune reveals its true form and battle is initiated. If the player agrees, the disguised kitsune will ambush the player in their sleep without warning, resulting in an automatic game over. | Howl  Fierce gnaw | Howl: N/A, lowers the player’s current attack strength by 5%  Fierce gnaw: 20 | 100 | Only one in the game, 100% | Art\_14 x5 (100%) AND  Art\_05 (100%) AND Art\_18 (100%) |
| **Boss\_03** | Ryu | (Japanese for dragon), serpentine water deity. The final boss in the game. It can summon anywhere between two to five lightning bolts per turn to strike the player, but each bolt can have a chance of missing. | Rain storm  Lightning strike | Rain storm: N/A, Cuts the player’s strength by 25% for the duration of the storm (2-5 turns)  Lightning strike: 25 per bolt; Each bolt has a 50% chance of missing the player | 200 | Only one in the game, 100% | N/A, player beats the game with no need for more items |

**3.1.3 Puzzles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Unique ID** | **Puzzle Name** | **Description** | **Solution** | **Hint (Optional)** |
| **Puz\_01** | I find this riddle humerus... | “I have no eyes, but I once did see. I once had thoughts, but now I’m white and empty.  What am I?” | A Skull | Bones! |
| **Puz\_02** | Marked by the habit of discretion. | “When you have me, you want to share me. When you share me, you no longer have me.  What am I?” | A Secret | I am not known or seen or not to be known or seen by others. |
| **Puz\_03** | Clip clip, clack clack | “The more of me you take, the more of me you leave behind.  What am I?” | Footsteps | Think quick on your feet! |
| **Puz\_04** | Patience is key | “What flies without wings?” | Time | Not a living thing. |
| **Puz\_05** | Passing Stars in the Night | “What constellation is currently seen in the night skies?”  Note: story dialog should mention the season in beginning. Answer is for Winter.  Answer choices provided by celestial globe:  Winter: Monoceros - "The Unicorn"  Spring: Lynx - "The Wildcat"  Summer: Draco - "The Dragon"  Autumn: Grus - "The Crane" | Monoceros | Must Interact with the “Celestial Globe” for answer. |
| **Puz\_06** | Inheritance | “An old man was murdered and left his wealth behind.  In his will, he stated that each of his four children would split his gold coins. They should be divided as follows:  The eldest should receive ½ of the gold pieces.  The 2nd child would receive ¼, and then 3rd child would get ⅕ of the gold.  Finally, he states that the youngest will get the remaining 49 gold coins.  How many gold coins did the old man have at death?” | 980 coins. | Remaining fraction |
| **Puz\_07** | Who’s the thief? | “You come across a servant’s diary. Inside it describes the theft of her favorite locket. She knows it was one of the other servants. She asks each servant who took the locket. Their responses were..  **Servant 1**: It wasn’t Servant 5, it was servant 2!  **Servant 2**: It wasn’t Servant 3, it wasn’t Servant 5!  **Servant 3:** It was Servant 5, it wasn’t Servant 1!  **Servant 4**: It was Servant 3, it was Servant 2!  **Servant 5**: It was Servant 4, it wasn’t Servant 1!  Each servant was known to tell exactly one lie.  Which servant took her locket?” | Servant 3 | Ask 2 and 4 |

### **3.1.4 Artifacts/Object**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Unique ID** | **Name** | **Description** | **Type(Optional)** | **List of actions** | **Usage(Optional)** | **Strength** |
| Art\_01 | Magic Mirror | A mirror that reflects brightly | Key Item | Use Mirror | Use the mirror to reveal the Tanuki’s true form. Can also be used to identify an enemy obscured by a darkened room. | n/a |
| Art\_02 | Katana | A sword with a wide blade, used for cutting rather than thrusting. | Weapon | Equip | Equipable item to enhance the player’s strength | 16 |
| Art\_03 | Odachi | A larger and longer form of a kanata. | Weapon | Equip | Equipable item to enhance the player’s strength | 27 |
| Art\_04 | Bo/Jo | Two handed Staffs | Weapon | Equip | Equipable item to enhance the player’s strength | 1 |
| Art\_05 | Healing Potion | A liquid with healing and magical properties. | Consumable | Drink | Drinking it will heal the player by 10%-20%. | N/A |
| Art\_06 | Journal | Book to keep track of clues/events | Key item/Starting Item | Read/Write | Write in/refer to this for guide/help reference | N/A |
| Art\_07 | Celestial Globe | Globe which shows constellations for each season.  Winter: Monoceros - "The Unicorn"  Spring: Lynx - "The Wildcat"  Summer: Draco - "The Dragon"  Autumn: Grus - "The Crane" | Key item | Use Globe | Use globe to determine the constellation names for each season. When globe is initiated through text command, player will type a season and the globe will display the constellation. The underlined words are the answers to be entered. | N/A |
| Art\_08 | Study Room Key | An old silver key. | Key Item | Open study room | Use to open the Study room | N/A |
| Art\_09 | Kegutsu | Heavy Boots | Boot Armor/Key Item | Equip | Needed to brace the Tengu’s attack. Also increases player’s Max HP by x1.3 | N/A |
| Art\_10 | Kikko | Light Armor | Torso Armor | Equip | Increase player’s Max HP by x1.5 | N/A |
| Art\_11 | Mempo | Facial Armor | Head Armor | Equip | Increase player Max HP by x1.2 | N/A |
| Art\_12 | Kaiken | Long Knife | Weapon | Equip | Equipable item to enhance the player’s strength | 3 |
| Art\_13 | Kusarigama | Chain-Sickle | Weapon | Equip | Equipable item to enhance the player’s strength | 7 |
| Art\_14 | Daruma Doll | A round doll modeled after Zen founder Bodhidharma | Consumable | Use Doll | Heals 10 HP and permanently increases the player’s maximum HP by 10 | N/A |
| Art\_15 | Kokeshi Doll | A wooden doll depicting a maiden | Consumable | Use Doll | If the player dies in battle and the Kokeshi Doll is in their inventory, the player revives with 100% of their health back and the doll disappears from their inventory. The doll can also be used before dying, achieving the same effects. | N/A |
| Art\_16 | Ladder | A ladder used for climbing. | Key Item | Use Ladder | Item used for climbing the roof of the training hall. | N/A |
| Art\_17 | Tengu’s Fan | Accessory | Misc. Armor | Equip | When equipped, the chance of escaping a battle successfully increases by 10% (25% total) | N/A |
| Art\_18 | Kitsune’s Tail | Accessory | Misc. Armor | Equip | When equipped, all enemy attacks have a 15% of missing the player | N/A |

### **3.1.5 User Interfaces**

The Action interface provides the player to navigate, initiate actions to puzzle and monsters, view item, save game, load game, and exit the game.

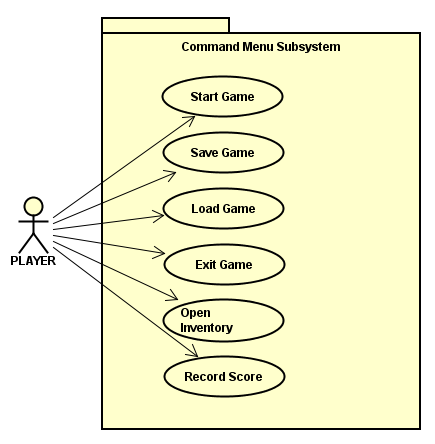
The Battle interface appears when the player initiates battle with monster or the monster initiates battle with the player. The battle interface will provide the player information on how to interact during battle. It will provide the player the ability to Attack, use items, or run.

The Puzzle Window interface appears when the player interacts with a puzzle or a riddle. It will gives the player the option to solve, receive hints, or leave the puzzle.

## **3.2 Software Product Features**

|  |  |
| --- | --- |
| **Features** | **Use Cases** |
| Command Menu(Johnson Lam)  3.2.1 | Save Game  Load Game  Open Inventory  Start Game  Exit Game  Record Store |
| Monster(Kyle Cousins)  3.2.2 | Escape Battle  Encounter Monster  Use Item  Defeat Monster  Get Loot  Attack Monster |
| Puzzle(Matt Smith)  3.2.3 | Initiate Puzzle  Enter Correct Answer  Enter Incorrect Answer  Monster Attack  View Journal  Exit Puzzle |
| Room(King Lo)  3.2.4 | Enter Room  Search/View/Describe Room  Exit Room |

**3.2.1 - Feature 1: Command Menu (John Lam)**



**Purpose of feature**

The purpose of the command menu feature enables users to play a new game and saving the game state to track all progress so they can load and be able to play where they left off. During the game, the user is able to open the inventory to choose and select an item. Items are used to progress certain obstacles such as puzzles or monsters to reach a goal. Certain artifact type cannot be used and only activated only when certain parameters are met. The overall score will be displayed continuously to notify the user’s progression, it is however not a necessity to progress through the game. The score calculation will vary depending on the user’s actions regarding the outcome of battles, puzzle attempts, artifact collection, and overall time completion will determine the overall score.

**Stimulus/Response Sequence**

**Start Game**

S: User starts game.

R: System creates a new game state, it displays a story and character information through text and generates the user’s base attributes and stats.

**Exit Game**

S: User exits game.

R: System halts and closes game state, the application exits.

**Save Game**

S: User save game.

R: System creates a game state that tracks the current progression of the game by storing the information to a text file.

**Load Game**

S: User load game.

R: System searches any saved files, if present the system will continue to load the game state, if not the system displays saves cannot be found.

**Open Inventory**

S: User opens inventory.

R: System only display a list of artifacts that the user found and picked up. It is then displayed in text with detailed information.

**Select Item**

S: User selects item.

R: System will allow the user to utilize the item depending on the artifact’s type. It will notify whether the user used the item or cannot use the item.

**Record Score**

S: User checks score.

R: System displays a score counter for the user to keep track of progression.

**3.2.1.1 - Functional Requirement 1.1**

**ID: FR1.1**

TITLE: Create New Game

DESC: A user opts for create new game state, the system will generate a new game state and load the required assets and data for the system to run properly.

DEP: n/a

**3.2.1.2 - Functional Requirement 1.2**

**ID: FR1.2**

TITLE: Exit Game

DESC: A user selects exit game in which the system enables a user to force exit the application during the main screen or during in game menu.

DEP: FR1.1

**3.2.1.3 - Functional Requirement 1.3**

**ID: FR1.3**

TITLE: Save Game

DESC: A user selects save game which will enable the system to create or overwrite a game state.

DEP: FR1.1

**3.2.1.4 - Functional Requirement 1.4**

**ID: FR1.4**

TITLE: Load Game

DESC: The system will search and locate the game save state and if one is present, it will load the game state with all information about character, artifacts, puzzles, and monster progression.

DEP: FR1.5

**3.2.1.5 - Functional Requirement 1.5**

**ID: FR1.5**

TITLE: Check Save State

DESC: System will check whether a save state is exists. If not the system will prompt the user that a file does not exist and the system.

DEP: n/a

**3.2.1.6 - Functional Requirement 1.6**

**ID: FR1.6**

TITLE: Open Inventory

DESC: The user selects open inventory and the system will output and display the list of artifacts in text. The order of artifacts will be determined by their types, and IDs.

DEP: n/a

**3.2.1.7 - Functional Requirement 1.7**

**ID: FR1.7**

TITLE: Check Inventory Space

DESC: System checks for empty space in the container that holds artifacts. The container cannot exceed a certain limit.

DEP: FR1.6

**3.2.1.8 - Functional Requirement 1.8**

**ID: FR1.8**

TITLE: Select Item

DESC: User opts for select item in which the system will display more detailed information including type, usage, and any additional effects that affects to the environment or the user.

DEP: FR1.6

**3.2.1.9 - Functional Requirement 1.9**

**ID: FR1.9**

TITLE: Check Item Type

DESC: The system checks for an artifact’s type and unique ID.

DEP: n/a

**3.2.1.10 - Functional Requirement 1.10**

**ID: FR1.11**

TITLE: Use Item

DESC: The user opts for use item in which the system will utilize an artifact and display its usage and prompts the user again for confirmation.

DEP: FR1.9

**3.2.1.11 - Functional Requirement 1.11**

**ID: FR1.12**

TITLE: Check Item Compatible

DESC: The system will check artifact’s type and will respond to appropriate conditions depending on the user’s current environment and situation. System will compare artifact’s type and its usability to check whether it is possible to use in certain conditions. If able to utilize an artifact, the artifact will leave from the user’s inventory and vice versa.

DEP: FR1.9

**3.2.1.12 - Functional Requirement 1.12**

**ID: FR1.13**

TITLE: Record Time

DESC: The system will display a number counter to track how long a user has been playing the game.

DEP: n/a

**3.2.1.12 - Functional Requirement 1.13**

**ID: FR1.14**

TITLE: Display Score

DESC: The system will continuously display a number counter for users to keep track of score.

DEP: FR1.15

**3.2.1.12 - Functional Requirement 1.14**

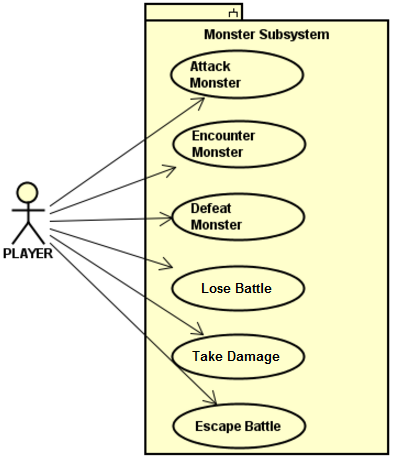
**ID: FR1.15**

TITLE: Calculate Score

DESC: The system will constantly check for user’s activities within the game and calculate a score depending on activities regarding monsters, artifacts, puzzles, and time. The given dependencies will specify the conditions to calculate overall score.

DEP: FR2.7(Defeat Monster), FR2.14(Lose Battle), FR3.8(Save Puzzle Attempts), FR4.4(Pick up artifacts/objects), FR1.13(Record Time)

**3.2.2 - Feature 2: Monster (Kyle)**



**Purpose of Feature**

This feature presents the player with the challenge of monsters to overcome throughout the game. Each monster has a probability of appearing once the player steps foot in a room (Except for certain conditions) and some of them can only be found in certain rooms. One or more species of monsters can be found in the same room, but only one will ever be encountered for each time the player enters that room. When a player encounters a monster, the player can choose different commands that will have an effect in battle, such as attacking the enemy, using an item during battle, or escaping the battle entirely. After an enemy is defeated, there is a chance that it will drop an item that the player can choose to pick up.

**Stimulus/Response Sequence**

**Attack Monster**

S: Player selects attack monster

R: System will subtract the monster’s HP by player’s total attack stat

**Encounter Monster**

S: Player enters a room where a monster can thrive and happens to encounter one

R: System determines which monster appears through probabilities and presents the monster to the player, along with a list of appropriate actions

**Defeat Monster**

S: Monster’s HP is reduced to zero or below

R: System removes the monster and places any dropped item(s) in the current room.

**Lose Battle**

S: Player’s HP is reduced to zero or below

R: System declares to the player that they have died and the game is over

**Take Damage**

S: Monster attacks player

R: System reduces the player’s current HP by the total attack strength of the monster

**Escape Battle**

S: Player selects Escape Battle

R: System randomly determines if the player will escape from the monster (15% chance that escaping is successful)

**3.2.2.1 - Functional Requirement 2.1**

**ID: FR2.1**

TITLE: Encounter Monster

DESC: The system runs a Monster Check (FR2.2), then presents a list of contextual actions the player can take, and performs an Action Restrict (FR2.3) for the duration of the battle.

DEP: N/A

**3.2.2.2 - Functional Requirement 2.2**

**ID: FR2.2**

TITLE: Monster Check

DESC: The system checks which monsters are tied to the current room, compares the encounter probability on each of those monsters, and selects a monster to present to the player based on the probability percentages.

DEP: FR2.1

**3.2.2.3 - Functional Requirement 2.3**

**ID: FR2.3**

TITLE: Action Restrict

DESC: The system temporarily disables the usage of certain actions the player could previously take when out of a battle, such as interacting with the room, leaving the room, and saving or loading a game.

DEP: FR2.1

**3.2.2.4 - Functional Requirement 2.4**

**ID: FR2.4**

TITLE: Attack Monster

DESC: The system runs a Player Attack Calculation (FR2.5), and displays the damage amount done to the monster.

DEP: FR2.1

**3.2.2.5 - Functional Requirement 2.5**

**ID: FR2.5**

TITLE: Player Attack Calculation

DESC: The system checks the player’s base attack stat integer, adds any modifying integers in play (equipped weapons, buffs/debuffs) and sets this sum as player total attack power. System then subtracts the monster’s current HP integer with player total attack power.

DEP: FR2.4

**3.2.2.6 - Functional Requirement 2.6**

**ID: FR2.6**

TITLE: Enemy HP Check

DESC: The system checks the current HP of the enemy after each party's attack. If the enemy's HP is less than or equal to zero, run Defeat Monster (FR2.7)

DEP: FR2.4, FR2.11

**3.2.2.7 - Functional Requirement 2.7**

**ID: FR2.7**

TITLE: Defeat Monster

DESC: The system declares to the player that the monster is defeated, runs an Item Check (FR2.8) and stores those items in the player's inventory. System then runs an Action Unrestrict (FR2.9).

DEP: FR2.6

**3.2.2.8 - Functional Requirement 2.8**

**ID: FR2.8**

TITLE: Item Check

DESC: The system checks which items are tied to the monster, compares the dropping probability on each of those items, and determines from there which items are presented to the player.

DEP: FR2.7

**3.2.2.9 - Functional Requirement 2.9**

**ID: FR2.9**

TITLE: Action Un-restrict

DESC: The system re-enables the usage of actions that were restricted during the battle (FR2.3)

DEP: FR2.3, FR2.7

**3.2.2.10 - Functional Requirement 2.10**

**ID: FR2.10**

TITLE: Escape Battle

DESC: The system randomly determines if the player can escape the battle during their turn, with a 15% chance of success. (25% if the Tengu’s Fan is equipped) If successful, the system removes the monster from the room and tells the player that they have successfully escaped from the battle. If unsuccessful, the system tells the player that they have failed in escaping, and grants the monster their turn.

DEP: FR2.2

**3.2.2.11 - Functional Requirement 2.11**

**ID: FR2.11**

TITLE: Take Damage

DESC: The system runs an Enemy Attack Calculation (FR2.12), and displays the damage amount done to the player.

DEP: FR2.1

**3.2.2.12 - Functional Requirement 2.12**

**ID: FR2.12**

TITLE: Enemy Attack Calculation

DESC: The system checks the enemy's base attack strength, adds any modifying integers in play (buffs/debuffs) and sets this sum as enemy total attack power. System then subtracts the player's current HP integer with enemy total attack power.

DEP: FR2.11

**3.2.2.13 - Functional Requirement 2.13**

**ID: FR2.13**

TITLE: Player HP Check

DESC: The system checks the current HP of the player after each party's attack. If the player's HP is less than or equal to zero, run Lose Battle (FR2.14)

DEP: FR2.4, FR2.11

**3.2.2.14 - Functional Requirement 2.14**

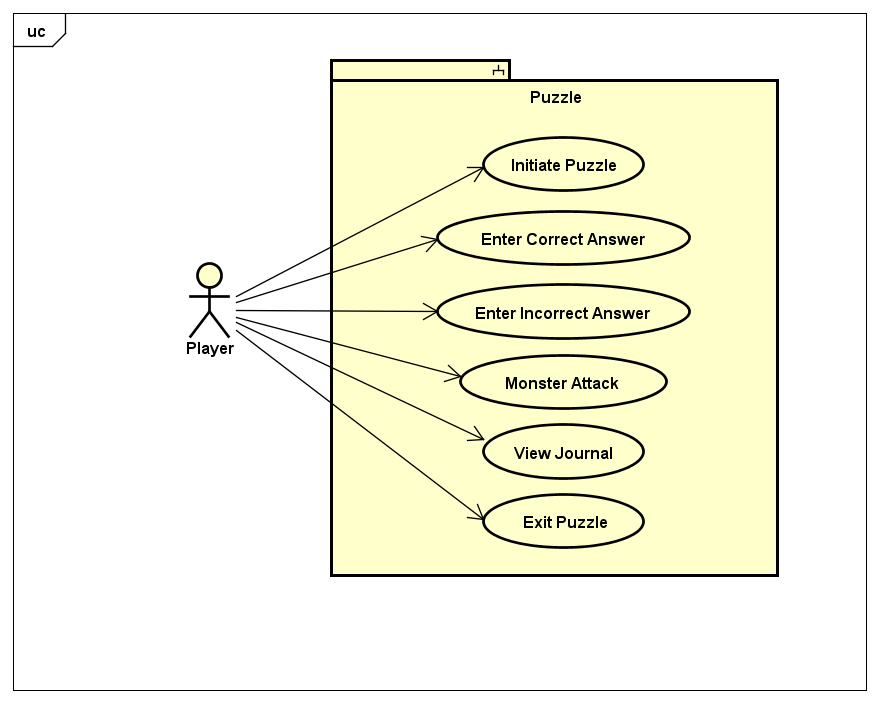
**ID: FR2.14**

TITLE: Lose Battle

DESC: The system declares to the player that they have died and their game is over, prompting the player if they want to load their last saved game or exit the application.

DEP: FR2.13

**3.2.3 - Feature 3: Puzzle (Matt)**



**Purpose of Feature**

This feature provides the player with the ability to interact with and solve puzzles. Puzzles can be found in any room and the user has the option to engage and disengage each. Certain puzzles require specific items to solve, which can be found throughout the map. When a puzzle is engaged a new puzzle window should display all features of the puzzle including current status of the puzzle, current number of incorrect answers. This window should also provide the ability to leave puzzle, answer puzzle, and view journal.

**Stimulus/Response Sequence**

**Initiate Puzzle**

S: User opts to initiate puzzle.

R: Puzzle window is opened.

**Enter Correct Answer**

S: User enter an answer that is correct.

R: Acknowledgement is shown to user that the correct answer was given, and puzzle window closes.

**Enter Incorrect Answer**

S: User enters an answer that is incorrect.

R: Acknowledgement is shown to user that the incorrect answer was given and puzzle window closes.

**Monster Attack**

S: User enters the 3rd incorrect answer for a given puzzle.

R: After puzzle window closes, a monster attacks.

**View Journal**

S: User opts to view journal through puzzle window.

R: Journal is opened for viewing.

**Exit Puzzle**

S: User opts to exit the puzzle.

R: Exits puzzle window.

**3.2.3.1 - Functional Requirement 3.1**

**ID: FR3.1**

TITLE: Initiate Puzzle

DESC: The user should be able to initiate the puzzle in a given room through main dialog.

DEP: N/a

**3.2.3.2 - Functional Requirement 3.2**

**ID: FR3.2**

TITLE: Create Puzzle Window

DESC: A new puzzle window should open when player initiates a puzzle.

DEP: FR3.1

**3.2.3.3 - Functional Requirement 3.3**

**ID: FR3.3**

TITLE: Enter Puzzle Answer

DESC: The puzzle window should allow the user to type and submit an answer.

DEP: FR3.2

**3.2.3.4 - Functional Requirement 3.4**

**ID: FR3.4**

TITLE: Open Journal

DESC: The puzzle window should provide a command to directly open the journal from inventory.

DEP: FR3.2

**3.2.3.5 - Functional Requirement 3.5**

**ID: FR3.5**

TITLE: Show Puzzle Status

DESC: The puzzle window should show the status of the puzzle (solved or not solved), as well as the current number of incorrect attempts since the last monster attack.

DEP: FR3.2, FR3.8.

**3.2.3.6 - Functional Requirement 3.6**

**ID: FR3.6**

TITLE: Exit Puzzle Window

DESC: The puzzle window should provide an option to exit the puzzle without attempting to answer.

DEP: FR3.2

**3.2.3.7 - Functional Requirement 3.7**

**ID: FR3.7**

TITLE: Show Puzzle Hint

DESC: The puzzle window should provide a command to display the puzzle hint if desired by player.

DEP: FR3.2

**3.2.3.8 - Functional Requirement 3.8**

**ID: FR3.8**

TITLE: Save Puzzle Attempts

DESC: The system should save the puzzle attempts, which only include actual answer submissions.

DEP: FR3.3

**3.2.3.9 - Functional Requirement 3.9**

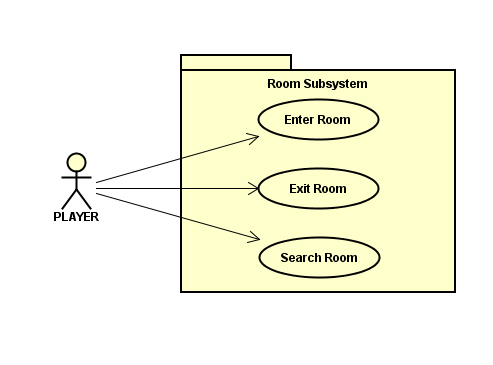
**ID: FR3.8**

TITLE: Puzzle Monster Attack

DESC: The system should initiate a monster attack after every third incorrect puzzle answer.

DEP: FR3.8, FR2.4

**3.2.4 - Feature 4: Room (King)**



**Purpose of feature**

The purpose of the Room feature is to allow the user/player to interact and navigate throughout the game such as enter, search, and exit the room.

**Stimulus/Response Sequence**

**Enter Room:**

**S:** User selects a room to enter

**R:** System responded by moving the user into the designated room

**Search Room:**

**S:** User search the room

**R:** System responded by giving a description of the room and item/objects in the room

**Exit Room:**

**S:** User exit the room

**R:** System responded by returning the user to the previous room

**3.2.4.1 - Functional Requirement 4.1**

**ID:FR4.1**

Title: Check Locked Room

DESC: Locked Room required a key item to enter the room

DEP: N/A

**3.2.4.2 - Functional Requirement 4.2**

**ID:FR4.2**

Title: Enter Room

DESC: Move the user into the designated room.

DEP: FR4.1

**3.2.4.3 - Functional Requirement 4.3**

**ID:FR4.3**

Title: Look Room

DESC: Display a description and useful artifacts/objects in the room

DEP: FR4.2

**3.2.4.4 - Functional Requirement 4.4**

**ID:FR4.4**

Title: Pick up artifacts/objects

DESC: Allows the user to take artifacts/objects in the room

DEP: FR4.2

**3.2.4.6 - Functional Requirement 4.6**

**ID:FR4.6**

Title: Trap Room

DESC: Contains fake puzzles that can initiate monster

DEP: FR4.2

**3.2.4.7 - Functional Requirement 4.7**

**ID:FR4.7**

Title: Exit Room

DESC: Return the user to the previous room

DEP: FR4.2

## **3.3 Performance Requirements**

The requirements in this section provide a detailed specification of the user interaction with the software and measurements placed on the system performance.

**3.3.1 - Quality Requirement 3.1**

**ID:QR3.1**

Title: Saved Game Data

DESC: The system must store the data for only one saved game at a time. If a “new game” is started with a current “saved game” stored, then the current “saved game” data will remain until the user attempts to save the “new game”, in which case the “new game”’s data will overwrite the existing “saved game”’s data.

**3.3.2 - Quality Requirement 3.2**

**ID:QR3.2**

Title: Response Time

Scale: Response time for user input.

DESC: System should respond to user input within ½ second.

**3.3.3 - Quality Requirement 3.3**

**ID:QR3.3**

Title: Usage of Puzzle Window

DESC: The different features of the puzzle window should be clear and easy to use. Text parser should always be available. Journal should be directly opened and user should not have to open inventory first. Puzzle window should close automatically after user enters an answer.

## **3.4 Design Constraints**

**3.4.1 - Constraint 4.1**

**ID:QR4.1**

Title: Developing Environment

DESC: The text based game is designed to be used on java enabled hardware running latest JRE.

## **3.5 Software System Attributes**

The following items provide a partial list of system attributes that can serve as requirements that should be objectively verified.

Other possible options include scalability, portability, robustness, recoverability, etc.

### **3.5.1 Reliability**

**3.5.4.1 - Quality Requirement 5.4.1**

**ID:QR5.4.1**

Tag: Dialog Reliability

Gist: Reliability of dialog input.

Scale: Reliability that the system provides a response to user dialog.

Must: Provide feedback on 100% of user input.

### **3.5.2 Availability**

**3.5.2.1 - Quality Requirement 5.2.1**

**ID:QR5.2.1**

Title: Internet Connection

Desc: Internet is only needed to download the app and install any updates.

Dep: N/A

### **3.5.3 Security**

**3.5.3.1 - Quality Requirement 5.3.1**

**ID:QR5.3.1**

Title: Admin Changes

Gist: Security of editing in-game data.

Scale: Admin should have a specific way to log in to game.

Must: Prevent anyone who does not have administrative rights from editing game data such as monster and puzzle locations or HP for user or monsters.

### **3.5.4 Maintainability**

**3.5.4.1 - Quality Requirement 5.4.1**

**ID:QR5.4.1**

Title: Function Testing

DESC: Test environments should be built for the application to allow testing of functions such as monster battles and puzzles.

## **3.6 Logical Database Requirements**

The software will be using text files to input and output data. Data containing monster, artifact, and puzzle assets can only be read, while saved data that are stored is able to read and write.

## **3.7 Other Requirements**