**Software Requirements and Design Document**

**For**

**Group 4**

Version 2.0

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# Overview

“Beneath the Manor” is a rouge-like dungeon crawl game with 2d graphics and randomly generated levels. The player will navigate through rooms attempting to reach the deepest point in the maze while avoiding enemies and collecting items. The player’s top-down view will encompass one room at a time, including doors or openings that lead to other rooms. The layout of each floor (what rooms border each other, and the location of rooms with stairs leading to other floors) will be randomly generated.

In addition to the game itself, the game will be downloadable from a website that also includes tutorial and background flavor information about the game. The website will have a home, faq, download, and guide page. All of which will have content that will relate to the game.

# Functional Requirements

For game:

* When user presses left arrow, the character moves to the left. (High Priority)
* When user presses right arrow, the character moves to the right. (High Priority)
* When user presses up arrow, the character moves to the up. (High Priority)
* When user presses down arrow, the character moves to the down. (High Priority)
* When the user goes through a door, a new room will be generated. (High Priority)
* When the user steps on coins, the gold will be incremented. (High Priority)
* When the user goes up stairs, a new floor will be randomly generated. (High Priority)
* When the user steps on an item, he picks up the item. (Medium Priority)
* When the user steps near an enemy, a fight will break out. (Low Priority)- it’ll be implemented later
* A dialog box will pop up with story when you press the button to start the game and you must hit continue to get to the game. (Low Priority)

For website:

* When the button is clicked the game downloads for both Windows and Mac. (High Priority)
* When the NavBar is used the other pages load and connect properly to each other. (Medium Priority)
* Connect the homepage using a nav bar to the other pages such as guide, download, and faq. (Medium Priority)
* Provide parallax properties to website containers. This means that there is dynamic movement on the page while scrolling. (Low Priority)
* Provide a guide to the game and answers to questions about the game in the form of an FAQ and Guide page. (Low Priority)

# Non-functional Requirements

For game:

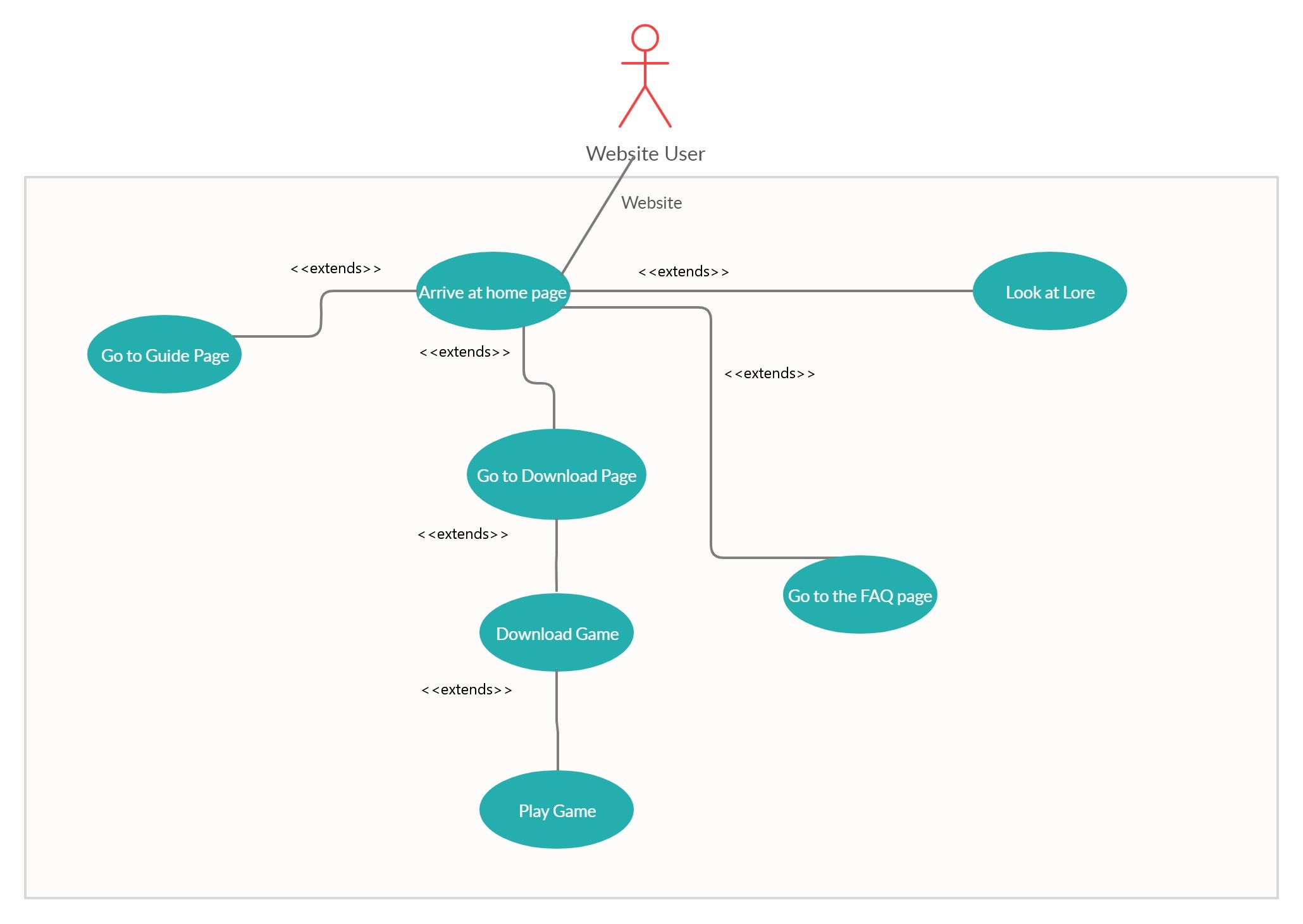
* Quality will be high when user is moving the character from space to space.
* Maintainability of bounds so the user does not crash the game.
* Scalability of the screen so the game always looks as intended (game has no random lines or weird sizing).
* Usability of .jar file.

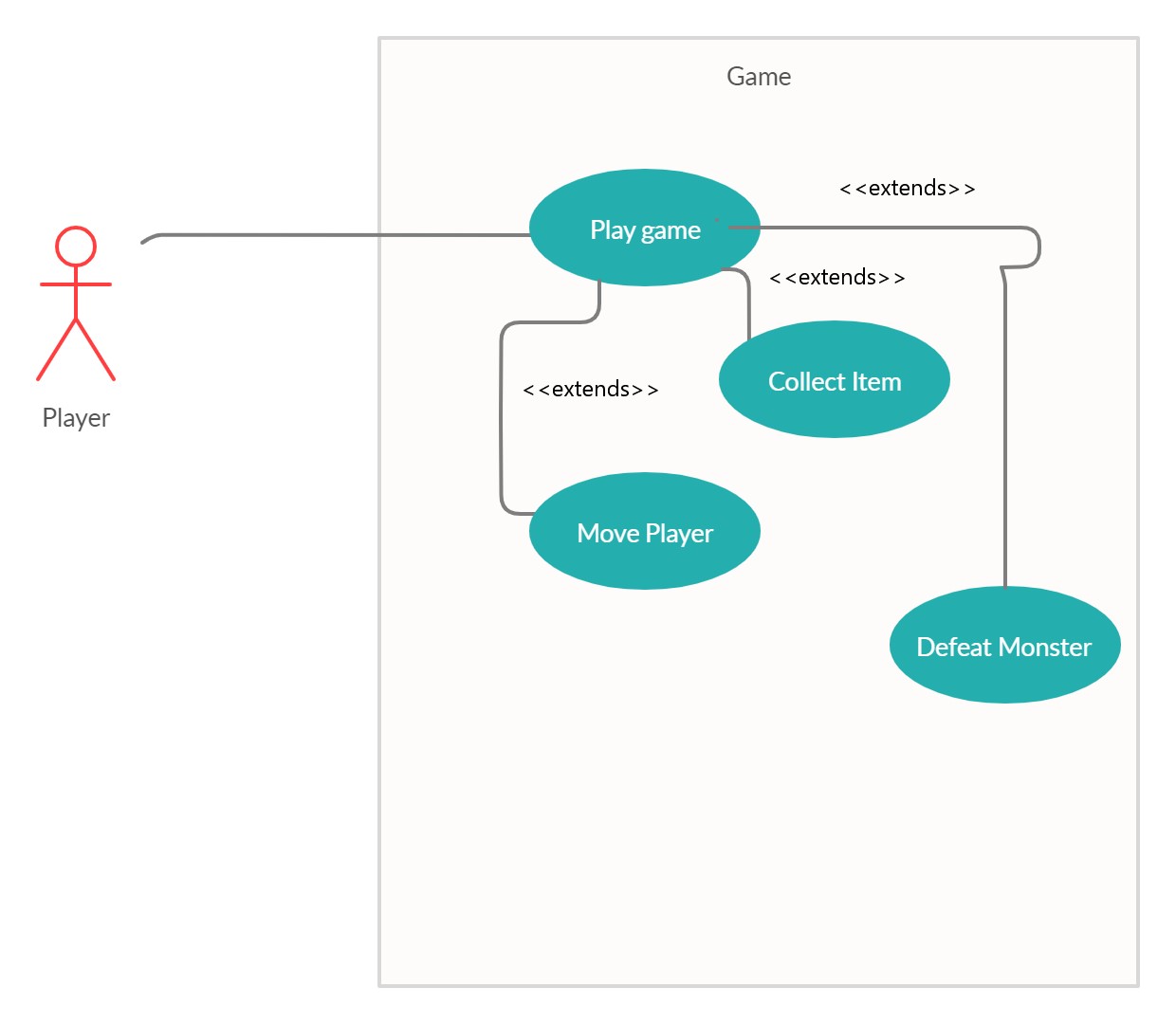
For Website:

* Scalability, for the website. The hosting platform Amazon Web Services (AWS) is a pay for what you use model. For example, if we got a million hits we pay for the exact number of people visiting our website and not just some flat fee.
* Safety, for the website. In the near future once the website is complete we are going to add the free SSL certificate provided to make the website secure. This will encrypt data and provide users with a safer experience.
* Availability, aiming for the game to work on both Windows and Mac.
* Accessibility, the game is accessible from the website through the download button.

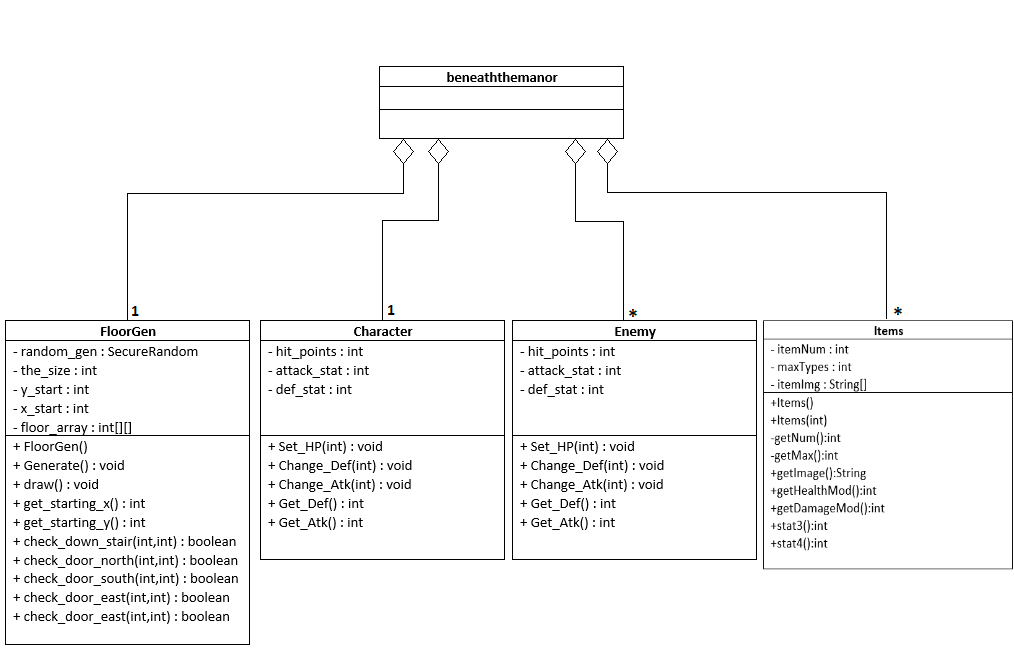
# Use Case Diagram

Website Use Case Diagram

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Game Use Case Diagram

# Class Diagram and/or Sequence Diagrams

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# Operating Environment

The game is intended for personal computers. The game is written in Java, so it should run on any operating system that can support the java runtime environment. The website is intended to run on all modern desktop browsers and mobile browsers as well. Website is written using HTML, CSS, and Javascript. Bootstrap CSS libraries were used as well.

# Assumptions and Dependencies

The user knows how to run a jar file.

The user has the correct version of Java Runtime.

We assume the user has access to the link via internet to the website through Amazon Web Services hosting platform.

We are dependent on the Bootstrap and AOS open source libraries to be properly working once we are finished.