Design Document – RPG “Role Playing Game”

1. Project Abstract
   1. Our project will be a GUI/text-based RPG game that will allow one user to navigate through a labyrinth. In the labyrinth the user can find and interact with puzzles, making decisions to solve the puzzles and find their way out once all puzzles are solved. The program will use a GUI/text-based system for entering commands and helping to determine player location in relation to objects in the story like walls and boundaries. Our team members include Steven Yeung, Jeanie Herold, and Ethan Powell. The location of our repository is RPG-team-project.
2. Team Members
   1. Ethan Powell
   2. Steven Yeung
   3. Jeanie Herold
3. Technologies Used
   1. Java
   2. JavaFX
4. The current division of labor is as follows
   1. Jeanie – Board class and Player class
   2. Ethan – Puzzle class(es) and Story class
   3. Steven – Item class(es)
5. UML Class Diagrams for each
   1. **Board Class – Jeanie**
      1. 
      2. Jeanie is responsible for the Board class. The Board class will hold the objects the player can interact with including the Player, Puzzles and items. By clicking on a N, S, E, or W button on the stage – the player will progress through squares on the Board in order to find Items or Puzzles to solve.
   2. **Player Class – Jeanie**
      1. 
      2. Jeanie is responsible for the Player class. The Player will move around the board, selecting their direction by clicking a button with cardinal directions of NSEW that will be on the Stage. The Player will interact with Puzzle and Item classes.
   3. A screenshot of a cell phone

      Description automatically generated**Puzzle Class – Ethan**
      1. Ethan is responsible for the puzzle class. The Puzzle class is a container for the logic of the puzzle that the user is working on. The current puzzle displayed will be a torch puzzle that will allow the player to click buttons that will turn on and off certain torches. When the player finds the right combination to turn on all the torches, the puzzle will be considered complete.
   4. **A screenshot of a cell phone

      Description automatically generatedStory Class – Ethan**
      1. Ethan is responsible for the Story class. The Story class is a collection of methods that print String statements to aid the player with solving puzzles, as well as providing atmosphere for the maze. When a player needs a hint, the appropriate hint for the puzzle they are working on will be displayed. Once 3 hints have been used, the final hint will display the solution to the puzzle. When the Player starts the game, a short introduction will be displayed to set the mood and provide background as to why the Player found themselves in the maze.
   5. **Item Class- Steven**

**Item**

**-**itemName: String

**-**toPickup(): Boolea

-addToInventory():Boolean

-failToPickup():Boolean

-isEnchanted(): Boolean

-isNotEnchanted(): Boolean

1. Steven is responsible for the item class. As the player progresses through the game, they will solve puzzles and by solving puzzles, they will encounter items. If the player successfully solves the puzzle, then the puzzle will drop an item and the player can choose to add it to his/her inventory. If the player solves the puzzle incorrectly, the item will not drop, and the player will find an alternate route. The isEnchanted() and isNotEnchanted methods are completely random when they drop.
2. Who did what:
   1. Jeanie – Document barebones/outline and describing her area that she will be working on.
   2. Ethan – Abstract, filling out some outlined items, describing the area that he will be working on
   3. Steven – Setting functions of true/false throughout the project, describing the area that he will be working on.