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Data Structures and Algorithms

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My Project will be a text based role playing game. The game will have a main class called game which will run and start the classes necessary to play the game. The game class will instantiate five classes, the Item class, the weapons class, the enemy class, the player class and the bags class. The player class will be in charge of creating the player and character that the user will be playing as. The enemy class will be used to generate and create 4 enemy objects for the user to fight. The roll class will create a dice that will be used either by the enemy or the hero, which would be used to determine if the player successfully or unsuccessfully committed an action. The Item class will be in charge of instantiating items that the player will use such as the min, medium, full and overkill potions. The weapons class will create and set values to weapons that the players will use they will also have durability ratings that the player will have to keep an eye on, weapons such as a sword and a dagger will be usable by the player. In addition couple of defensive weapons will be used by the player such as a shield, a helmet, a chest plate and plate legs. These items will also have a durability that will break on them and will revert them back to their original items and weapons.

My Project will use

1. A game class as a main
2. A Player class- that will instantiate the hero that the player will be using, by using setters such as to set the health, the name and the gender. The class will also have methods to use for rolling to determine outcomes of the attack and defend method in the class. As well as having methods that will allow the player to equip weapons, use potions and wear armor
3. A Weapons class- that will instantiate weapon objects for the player to use, that will be used by setting the hit points that the weapon will deal as well as the name and the durability of the weapon
4. An Item class-that will instantiate items such as potions and armor for the player to use, using setters to set the name, the amount that is healed by said item
5. A roll class- that will instantiate dice to be rolled to measure probability and outcomes of fights. By using a random number generator and dividing the random number which is determined by the enemy class or player class and is divided by the total number of sides which is then returned as the outcome to be compared to by either the enemies roll or the players roll
6. A Resizable bag array- that will instantiate four bags to carry and hold items, armor, shield and weapons for the player to use
7. An enemy class- that will instantiate enemy objects for the player to fight against during the game. Using setters to set the sided die they have ,as well as their name, amount of damage they can deal and the amount of health they have