Specification 1:

I am going to try to design and implement a text based RPG/adventure game. Some of the features I think are essential to include are: a player character, items, and enemies. The character should have stats, such as hit points (i.e. a life total); a level (starting at level 1, increasing by defeating enemies to earn experience, and gaining stats at each level); and an inventory or at least a way to equip items such as weapons that will affect the character’s stats. That means there also need to be enemies for the player to fight, that will also have some stats, and that will give a certain amount of experience to the player when defeated. It also means that there should be items that the player can equip or use in some way to gain a non-permanent boost to stats. Lastly, I would really like to implement a way to for the character’s information to be saved, perhaps even a password entry system, although I will put this under “would like to include,” since I am not 100% confident I will know how to implement it.

A few features that I would like to include if I have time (and can figure out how!) are: skills for the player character to use, that interact with the world in some new way; more equipment for the character to use, such as defense items; a system of money and shops where the player can spend the money on items; locations in the game world that the player can move around in.

Specification 2 – Use Case:

**Primary Actor:** Any user (“Player”)

**Stakeholders and interests:**

Author: Wants to create a fun game, to show mastery of programming concepts learned in class, and to get a good grade on the project.

Professor: Wants program to show that author has understanding of programming concepts and can implement them.

**Preconditions:** Computer is booted and SuD is running, ready to start new game.

**Success Guarantee (or Postconditions):** One player has spent some time playing the game—they have been able to fight enemies, gain experience, and use at least one item as his player character.

**Main Success Scenario (or Basic Flow):**

1. Player instigates a new game, and their character “enters” the world.
2. The player can choose:
   1. Look at their inventory. Player can now choose:
      1. Use an item.
      2. Go back.
   2. Look for an enemy to fight.
      1. Enemy found. Enters into a battle. Go to step 3.
      2. Enemy not found. Back to step 2.
3. The player and the enemy do battle, each attacking the other. Attack values and life totals are determined by character stats. If the enemy’s life total falls below 0 before the player’s, the enemy is defeated. Otherwise, the player is defeated.
   1. The player defeats an enemy. The enemy drops some items that the player gets. The player also gains experience points towards advancing in levels.
   2. The player is defeated by the enemies—game over. Can choose to play again.