CS 116 - Greenfoot Design (individual work)
due via email to bauerm@iit.edu by Friday 4/17 midnight

(30 points) Design a multi-object application containing inheritance.

The game is up to you. You cannot use the turtleWorld game we did in lab.

You must, however, adhere to the following guidelines in your game:

- You must have at least 3 worlds and transition from one to the other (suggested: 1.choose level/load previous game 2. play the game 3.pause the game/save the status). The game itself can have multiple worlds also if you want.
- You must have a high score listing that writes out to a file when the game is ended, and reads back in when the game is started.
- You must have a way for the user to pause a game, save the state of the world and all objects to a file, and reload a game later. To do this you should maintain your own collection of references to Actor objects in your MyWorld.

http://www.cs.iit.edu/~cs116mb/project/UML_Design_Reference.pdf

Create the following for the above requirements, use the UML Design Reference for assistance

1. Create Use Case Diagrams for all actors in the Requirements Document. (PDF pages 6-7)
2. Create a list of nouns and noun phrases from the above Requirements Document. (PDF pages 9-10)
3. Create Class Diagrams only for the nouns and noun phrases that have significance. (PDF page 11)
4. Show the associations between the classes and any classes that are compositions of other classes (PDF pages 12-14)
5. Add Attributes to the Class Diagrams created earlier. (PDF pages 15-19)
6. Add Operations to the Class Diagrams created earlier. (PDF pages 27-32)
7. Create test cases for each class (tables or short descriptions).