CSCI-101 Programming 1
Week of Nov 27 - Lab 14

INSTRUCTIONS

Create a directory named **lab14** in your labs directory. Include the following files in your **lab14** directory.

Create a file named **monsters.txt** that includes the text shown below. The first line of the file contains the number of monsters included in the file. Each subsequent line contains the name, damage, and initial health of a monster.

> **3**
> **Thundergaw, 300,1700**
> **Greyoll,150,1500**
> **Sin,120,1200**

Write a class named **Monster** that models a video game monster and contains the following:

- Fields that hold the monster's **name** (String), **damage** (int), and **health** (int).
- A constructor that sets all of the fields using data passed into the constructor.
- Getters for each field.
- A setter for the **health** field.
- A method named **toString** that overrides the **Object** class' **toString** method and returns a string that contains all of the data in the fields, separated by commas.
- A method named **equals** that overrides the **Object** class' **equals** method and considers 2 monsters equals if their names are the same.

Create a class named **Exam3** that includes the following:

- A method named **readMonsters** that takes a String as an argument and returns an array of **Monster** elements. The method reads the file whose name is passed in as an argument, creates an array of **Monster** elements using the data in the file, and returns the array.

- A method named **writeMonsters** that takes a String and an array of **Monster** elements as arguments. The method writes the number of monsters in the array on the first line of the file (whose name is passed into the method). The method then write on subsequent lines the name, damage, and health (with commas between them) of each monster.

- A method named **main** that reads the contents of **monster.txt** using **readMonsters** and stores them in an array named **arr1** then writes the contents of **arr1** to the file named **monsters.bkup** using **writeMonsters**.