CS2050 Fall 2017
Homework 2
Due: Tuesday, Sept 11, 2017

This second assignment will be to implement a List two ways - an array and a linked list.

Use the Step by Step process from HW 1

1. Create a class named **`Countries.java`** with the following fields:

```
countryName        String
latitude           String
longitude          String
countryArea        integer
countryPopulation  integer
countryGDP         double
countryYear        integer
```

2. Create another class, `Borders` in the file `Borders.java`, which is used to identify that two countries border each other.

3. Create a third class, named `HW2.java` which will create an array of Countries and a linked list of Countries. Name these two lists `countryArray` and `countryLL`. Add the necessary additional fields to `countryLL` to implement a linked list.

4. In `HW2.java` add a method that reads the data from a file and populates the two lists with information for Germany, Netherlands, Belgium, Luxemburg, Poland, Czech Republic, Austria, France, and Switzerland.

Data for this assignment can be found at
`https://www.cia.gov/library/publications/the-world-factbook/`

5. The user interface - only in `HW2.java` asks the user to pick one of the following actions:
   • Import the data
   • Display list of all countries that border Germany
   • Display list of all countries that have a population greater than 100 million
   • Display list of all countries that border Germany AND have a population greater than 100 million
   • Quit the program

Use data for 2016

Suggestions & Notes:
   • Create a text file that contains the data in the format that matches the fields in the classes. Then read the file and populate the objects.
   • Create the class files with stubs. Compile and verify at each step the program works. Design and build incrementally. Once you have something working, go on to the next method. Don't try to do everything at once.
   • The only user involvement is in `HW2.java` class.
   • Avoid hard-coding when possible. In other words, set up variables that contain "Germany" and 100 million so these can be easily changed.
   • Avoid duplication of code.
   • Remember, only **HW2.java** will contain the **main()** method.

To Turn In:
Upload to your github account the following:
1) All files for this program
2) Plain text output.