Project Goal:

The goal of this project is to practice the following Java subjects:

- GUI development (Using SWING/AWT libraries)
- Database access (MySQL)
- Web API interaction
- Parallel Processing concepts

Project Summary:

Develop a Java based windows application (GUI) that will allow users to view the population of one or more selected country from a list of all countries. Use the MySQL "world" data base to retrieve the list of the countries. You can use the World Population WEB API to get the population of a given country at some specific date.

Application Components detail:

1. dateTf **JTextField** (10'):
    a. Allow user to enter a date by form dd/mm/yyyy
2. countrySelection **JList** (15'):
    a. The countries should be read in from the MySQL example data base "World", as demonstrated in class, sorted.
    b. The selected countries will be displayed in selectedCountries JList and used when user click get population JButton
3. selectedCountries **JList** (10')
    a. Display nothing at start up
    b. When user select countries from countrySelection **JList**, add elements to this JList.
    c. When user double click country from this list, then that country will be removed from this list.
    d. No duplicates are allowed in this JList.
4. Get Population **JButton** (50')
    a. It is a button to obtain all information user input from dateTf JTextField and selectedCountries JList
    b. After the user clicks the button, it should call function to use World Population WEB API with **threading**.
    c. Display the results into the resultPopulation JTable, with country matching to its population at date where user input in dateTf
5. resultPopulation **JTable** (15')
    a. 2 columns, country and population
    b. Empty data at first and after user press Get Population it populates.
    c. No value if user enters wrong value.

<u>**Notes:**</u>

- Use Java Window Builder
- Use World Population API: http://api.population.io or any other WEB based free API that you may choose.
- In specific use the following API as example:
  - Determines total population for a given country on a given date. Valid dates are 2013-01-01 to 2022-12-31.
  - http://api.population.io/1.0/population/Brazil/2015-12-24/?format=api
  - http://api.population.io/1.0/population/Brazil/2015-12-24/?format=json

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- The project can be done in groups of two.
- Deadline: 3/16/2017
- Remember: Winter grades due at 3pm on Monday March 20th