Delta College

CST 183
Programming Assignment 7

Fall 2019
Instructor: T. Klingler

Objective

To build a complete working Java program that applies arrays and list processing.

Overview & Instruction

Write a *menu-driven* to analyze population data. You are provided with a (significantly large) comma-delimited file countyPopData1017.txt that includes the following fields:

```
{FIPScode} {county} {state} {8 more fields with 2010-2017 county populations}
```

You program should read the entire contents of the file into either parallel arrays or one array of objects.

Create a simple menu-driven interface driven by layers of dialog boxes. Offer the user choices for analyzing population data and trends. Offer the following choices:

Search for ...	by prompting for ...
County population by year	FIPS code, year
County population change	FIPS code, startYear, endYear
State population by year	Two-char state code, year
State population change	Two-char state code, startYear, endYear
U.S. population by year	Year

For all county searches, be sure to include the county name in the output dialog presented to the user.

Allow the user to go back to a "main menu" when a query is completed. They can then be offered the option to submit another request. To enable this efficiently, be sure to load the data from the file into the array(s) only once at the launch of the program. Use the speed of array searches to retrieve the info instead of reloading the file for each transaction.

Be sure to build in error messages for incorrect FIPS codes or state codes. Years must also be in the range of 2010 to 2017.

Finally, also be sure to consider modularity in this program whether using a procedural approach or an object oriented approach.

Deliverables

Deliver the following to the online course management system **dropbox** as your final product:

- **Upload** your **source code** (.java) file

Notice

This is an individual assignment. You must complete this assignment on your own. You may not discuss your work in detail with anyone except the instructor. You may not acquire from any source (e.g., another student or an internet site), a partial or complete solution to a problem or project that has been assigned. You may not show another student your solution to an assignment. You may not have another person (current student, former student, tutor, friend, anyone) "walk you through" how to solve the assignment.