**PROJECT Bank record generations 100 points**

**Objective** To write a program that performs data analysis from class objects created in lab #2.

***PROJECT DESCRIPTION***

Bank of IIT is in desperate need of analytics from its clients for its loan application process. Currently records show 600 clients exist and the bank is hoping to expand it’s clientele by offering premium loans to deserved grantees.

Perform the data analysis as follows for this lab.

***Project Details***

-Add to your existing project files from lab 2, a new class called Records. Have the class *extend* the BankRecords class to grab hold its instance methods plus the BankRecord object array.

-Provide comparator classes implementing ***java.util.Comparator***for comparing various fields in the application’s data analysis requirements.

-Perform the following analysis requirements and output for the Records class

Display the following data analytics to the console:

* average income
* max and min age per location
* number of females with mortgages
* number of males with both car and 1 children per location

Write all displayed data to a text file called *bankrecords.txt* relative to your project path as well. Append your name to the end of the file plus the date.

Include all your source code, console output and a snapshot of your bankrecords.txt file into a Word doc file as well your entire app into a zip file for credit.

**Extra Credit** options – up to 10 points max. You may do a combination of options, and depending on how complete and accurate your results are, you will be awarded just points.

1. UML of entire project source files
2. Create a login source file to serve as the first window to appear when the app runs which authenticates the bank manager’s username and password (you can hardcode the required credentials) and upon a successful login, runs the Records.java file allowing access to display the analytics.

Use JoptionPane dialog boxes for username and password authentication.