Lab 3 Objectives

1. Example of creating a comparator

For your first analytic response that is to show the

* **average income for males vs. females**

you may want to create a comparator class to sort by gender

Create a comparator java class for your project as follows for sorting by sex

import java.util.Comparator;

public class GenderComparator implements Comparator<BankRecords>{

@Override

public int compare(BankRecords o1, BankRecords o2) {

// use compareTo to compare strings

int result = o1.getSex().compareTo(o2.getSex());

return result;

}

 }

This comparator can be useful for the next analytic result namely for

* **number of females with a mortgage and savings account**

For your final analytic, namely for

* **number of males with both a car and 1 child per location**

it would probably be beneficial to allow for a sort by region. You can do so in a similar manner as the comparator listed above, but compare of course by region and not sex as a primary sort.

2. Call up your comparators in your Records.java file.

Ex. in main(), you can call a series of functions to perform your analytic results.

Set up your file to also not only write to the console but to a text file.

See example that follows…

**import** java.io.FileWriter;

**import** java.io.IOException;

**import** java.util.Arrays;

**public** **class** Records **extends** BankRecords{

//create formatted object to write output directly to the

//console and to a file

**static** FileWriter *fw* = **null**;

**public** Records(){

**try** {

*fw* = **new** FileWriter("bankrecords.txt");

} **catch** (IOException e) {

e.printStackTrace();

}

}

**public** **static** **void** main(String[] args) {

Records br = **new** Records();

br.readData();

//call functions to perform analytics

*AverageComp*(); // analyze average income

//femsComp(); // analyze females w. mort/savings account

//malesComp(); // analyze male count

// \*\*\* close out file object \*\*\*//

**try** {

*fw*.close();

} **catch** (IOException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

}

**private** **static** **void** AverageComp() {

Arrays.*sort*(*robjs*,**new** GenderComparator());

**double** fsum = 0, msum=0, fCt=0,mCt=0;

**for** (**int** i=0;i<*robjs*.length;i++)

**if** (*robjs*[i].getSex().equals("FEMALE")) {

fsum += *robjs*[i].getIncome();

++fCt;

}

**else**{

//...

}

//print resulting averages to console and file

**double** femAvg = fsum/(fCt);

**double** maleAvg = msum/(mCt);

System.***out***.printf(" ... ");

**try** {

*fw*.write("Avg inc. for females " + femAvg);

*fw*.write("...");

} **catch** (IOException e) {

e.printStackTrace();

}

}

}

Continue in like manner as above to finish up two other method definitions called

in main().