**Shahaan Mirza**

**Papademas**

**ITM411**

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Lab 2

**Client**

public abstract class Client {  
 //reads file data  
 public abstract void readData();  
 //processes file data  
 public abstract void processData();  
 //prints out file data  
 public abstract void printData();  
}

**BankRecords**

/\*Name: Shahaan Mirza  
Project Description: Read data from a CSV file and print out the first 25 rows.  
\*/  
import java.io.\*;  
import java.util.ArrayList;  
import java.lang.\*;  
import java.util.Arrays;  
import java.util.List;  
  
public class BankRecords extends Client {  
  
 //setup static objects for IO processing  
 //array of BankRecords objects  
 static BankRecords *robjs*[] = new BankRecords[600];  
 //arraylist to hold spreadsheet rows & columns  
 static ArrayList<List<String>> *array* = new ArrayList<>();  
  
 //instance fields  
 private String id;  
 private int age;  
 private int children;  
 private String sex;  
 private String region;  
 private String married;  
 private String car;  
 private String save\_act;  
 private String current\_act;  
 private String mortgage;  
 private String pep;  
 private String path="/Users/shahaanmirza/Desktop/School/ITM411/Lab2/bank-Detail.csv";  
 private double income;  
  
 //getter methods  
 public int getAge() {  
 return age;  
 }  
 public int getChildren() {  
 return children;  
 }  
 public String getId() {  
 return id;  
 }  
 public String getSex() {  
 return sex;  
 }  
 public String getRegion() {  
 return region;  
 }  
 public String getMarried() {  
 return married;  
 }  
 public String getCar() {  
 return car;  
 }  
 public String getSave\_act() {  
 return save\_act;  
 }  
 public String getCurrent\_act() {  
 return current\_act;  
 }  
 public String getMortgage() {  
 return mortgage;  
 }  
 public String getPep() {  
 return pep;  
 }  
 public double getIncome() {  
 return income;  
 }  
  
 //setter methods  
 public void setId(String id) {  
 this.id = id;  
 }  
 public void setAge(int age) {  
 this.age = age;  
 }  
 public void setChildren(int chil){  
 this.children = chil;  
 }  
 public void setSex(String sex){  
 this.sex = sex;  
 }  
 public void setRegion(String reg){  
 this.region = reg;  
 }  
 public void setMarried(String mar){  
 this.married = mar;  
 }  
 public void setCar(String car){  
 this.car = car;  
 }  
 public void setSave\_act(String sact){  
 this.save\_act = sact;  
 }  
 public void setCurrent\_act(String cact){  
 this.current\_act = cact;  
 }  
 public void setMortgage(String mort){  
 this.mortgage = mort;  
 }  
 public void setPep(String pep){  
 this.pep = pep;  
 }  
 public void setIncome(double inc){  
 this.income = inc;  
 }  
  
 //overridden abstract methods  
 @Override  
 public void readData(){  
 //create buffered reader to read file path  
 {  
 try {  
 String line;  
 BufferedReader br = null;  
 br = new BufferedReader(new FileReader(new File("bank-Detail.csv")));  
 //parse csv lines  
 while((line = br.readLine()) != null){  
 *array*.add(Arrays.*asList*(line.split(",")));  
 }  
 processData(); //call function for processing record data  
 } catch (FileNotFoundException e) {  
 e.printStackTrace();  
 } catch (IOException e) {  
 e.printStackTrace();  
 }  
 }  
 }  
  
 @Override  
 public void processData() {  
 //create index for array while iterating thru arraylist  
 int idx = 0;  
  
 //create for each loop to cycle thru arraylist of values  
 //and PASS that data into your record objects' setters  
 for (List<String> rowData : *array*) {  
 //initialize array of objects  
 *robjs*[idx] = new BankRecords();  
 //call setters below and populate them, item by item  
 *robjs*[idx].setId(rowData.get(0)); //get 1st column  
 *robjs*[idx].setAge(Integer.*parseInt*(rowData.get(1))); //get 2nd column  
 *robjs*[idx].setSex(rowData.get(2));  
 *robjs*[idx].setRegion(rowData.get(3));  
 *robjs*[idx].setIncome(Double.*parseDouble*(rowData.get(4)));//here  
 *robjs*[idx].setMortgage(rowData.get(10));  
 /\*continue processing arraylist item values into each array  
 object-> robjs[] by index\*/  
 idx++;  
 }  
 printData(); //call function to print objects held in memory  
 }  
  
  
 @Override  
 public void printData() {  
 for(int i =0;i<25;i++){  
 System.*out*.println(*robjs*[i].getId()+"\t"+*robjs*[i].getAge()+"\t"+*robjs*[i].getSex()+"\t"+*robjs*[i].getRegion()+"\t"+*robjs*[i].getIncome()+"\t\t"+*robjs*[i].getMortgage());  
 }  
 }  
}

**BankRecordsTest**

public class BankRecordsTest {  
 public static void main(String[] args) {  
 BankRecords recordObject = new BankRecords();  
 System.*out*.println("ID \t\t"+"AGE\t"+"SEX\t\t"+"REGION\t"+"INCOME\t\t"+"MORTGAGE");  
 recordObject.readData();  
 }  
}

**Output**

**Calendar

Description automatically generated with medium confidence**