**client.java**

**package** org.analytics;

**public** **abstract** **class** Client

{

**public** **abstract** **void** readData();

**public** **abstract** **void** processData();

**public** **abstract** **void** printData();

}

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**BankRecords.java**

**package** org.analytics;

**import** java.io.BufferedReader;

**import** java.text.SimpleDateFormat;

**import** java.io.File;

**import** java.io.FileReader;

**import** java.io.IOException;

**import** java.util.ArrayList;

**import** java.util.Arrays;

**import** java.util.Calendar;

**import** java.util.List;

**public** **class** BankRecords **extends** Client {

// Create an array of BankRecords objects and an ArrayList to store the data from the CSV file

**public** **static** BankRecords *ref1*[] = **new** BankRecords[600];

**static** ArrayList<List<String>> *array* = **new** ArrayList<>();

**private** String id;

**private** **int** age;

**private** String sex;

**private** String region;

**private** **double** income;

**private** String married;

**private** **int** children;

**private** String car;

**private** String save\_act;

**private** String current\_act;

**private** String mortgage;

**private** String pep;

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

System.***out***.println("Welcome to Bank of IIT");

// Create an instance of the BankRecords class

BankRecords myobj1 = **new** BankRecords();

// Read the data from the CSV file

myobj1.readData();

// Print the current date and time and the name of the programmer

String timeStamp = **new** SimpleDateFormat("yyyy/MM/dd HH:mm:ss").format(Calendar.*getInstance*().getTime());

System.***out***.println("Cur dt=" + timeStamp + "\nProgrammed by Guruteja\n\n");

}

**public** **void** readData() {

BufferedReader br = **null**;

**try** {

// Create a BufferedReader object to read the data from the CSV file

br = **new** BufferedReader(**new** FileReader (**new** File("bank-Detail(2).csv")));

String line;

// Read each line of the CSV file and add it to the ArrayList

**while** ((line = br.readLine()) != **null**)

{

*array*.add(Arrays.*asList*(line.split(",")));

}

}

**catch** (Exception e) {

// If there's an error reading the CSV file, print an error message

System.***err***.println("There was a problem loading the file");

}

processData(); // Call the processData method to convert the data in the ArrayList to BankRecords objects

}

@Override

**public** **void** processData() {

// Create an index variable for the ref1 array

**int** idx=0;

//Iterate through the ArrayList and create a BankRecords object for each row of data

**for** (List<String> rowData: *array*) {

// Initialize the BankRecords object

*ref1*[idx] = **new** BankRecords();

// Set the values of the BankRecords object using the data from the ArrayList

*ref1*[idx].setId(rowData.get(0)); //get 1st column

*ref1*[idx].setAge(Integer.*parseInt*(rowData.get(1))); //get 2nd column

*ref1*[idx].setSex(rowData.get(2));

*ref1*[idx].setRegion(rowData.get(3));

*ref1*[idx].setIncome(Double.*parseDouble*(rowData.get(4)));

*ref1*[idx].setMarried(rowData.get(5));

*ref1*[idx].setChildren(Integer.*parseInt*(rowData.get(6)));

*ref1*[idx].setCar(rowData.get(7));

*ref1*[idx].setSave\_act(rowData.get(8));

*ref1*[idx].setCurrent\_act(rowData.get(9));

*ref1*[idx].setMortgage(rowData.get(10));

*ref1*[idx].setPep(rowData.get(11));

idx++;// Increment the index variable

}

}

@Override

**public** **void** printData() {

// Print the headings of the table

System.***out***.println("No\tID\t\tAGE\t\tSEX\t\tREGION\t\tINCOME\t\tMORTGAGE");

System.***out***.println("---\t-----\t\t---\t\t---\t\t------\t\t------\t\t------");

**for** (**int** i=0;i<25;i++){

String s=String.*format*("%s\t\t%d\t\t%s\t\t%s\t\t%.2f\t\t%s",

*ref1*[i].getId(),*ref1*[i].getAge(),*ref1*[i].getSex(),*ref1*[i].getRegion(),*ref1*[i].getIncome(),*ref1*[i].getMortgage());

System.***out***.println(s);

}

}

//getter and setter methods for the various attributes

**public** String getId() {

**return** id;

}

**public** **void** setId(String id) {

**this**.id = id;

}

**public** **int** getAge() {

**return** age;

}

**public** **void** setAge(**int** age) {

**this**.age = age;

}

**public** String getSex() {

**return** sex;

}

**public** **void** setSex(String sex) {

**this**.sex = sex;

}

**public** String getRegion() {

**return** region;

}

**public** **void** setRegion(String region) {

**this**.region = region;

}

**public** **double** getIncome() {

**return** income;

}

**public** **void** setIncome(**double** income) {

**this**.income = income;

}

**public** String getMarried() {

**return** married;

}

**public** **void** setMarried(String married) {

**this**.married = married;

}

**public** **int** getChildren() {

**return** children;

}

**public** **void** setChildren(**int** children) {

**this**.children = children;

}

**public** String getCar() {

**return** car;

}

**public** **void** setCar(String car) {

**this**.car = car;

}

**public** String getSave\_act() {

**return** save\_act;

}

**public** **void** setSave\_act(String save\_act) {

**this**.save\_act = save\_act;

}

**public** String getCurrent\_act() {

**return** current\_act;

}

**public** **void** setCurrent\_act(String current\_act) {

**this**.current\_act = current\_act;

}

**public** String getMortgage() {

**return** mortgage;

}

**public** **void** setMortgage(String mortgage) {

**this**.mortgage = mortgage;

}

String getPep() {

**return** pep;

}

**public** **void** setPep(String pep) {

**this**.pep = pep;

}

}

/\*

The main method is the program's starting point.

\*/

**OUTPUT:**

**Bankrecords.txt**

**Graphical user interface, text, application, Word

Description automatically generated**

Graphical user interface, text, application

Description automatically generated