**Source Code Of All The System**

**//Main.Java**

import java.io.\*;  
import java.util.ArrayList;  
import java.util.Random;  
import java.util.Scanner;  
  
public class Main {  
 static Scanner s = new Scanner(System.in);  
 static ArrayList<Bank> clients = new ArrayList<>();  
 static String[] account\_type = {"savings", "current", "salary", "fixed"};  
 public static int accno\_generator() {  
 Random rand = new Random();  
 int resRandom = rand.nextInt((9999 - 100) + 1) + 10;  
  
 return resRandom;  
  
 }  
  
 public static void usingBufferedWritter(String s) throws IOException {  
 File file = new File("append.txt");  
 FileWriter fr = new FileWriter(file, true);  
 BufferedWriter br = new BufferedWriter(fr);  
 br.write(s);  
  
 br.close();  
 fr.close();  
 }  
 public static void openAccount()  
 {  
 System.out.println("For how many Users you want to open an account ?");  
 int n = s.nextInt();  
 for (int i = 0; i < n; i++) {  
 s.nextLine();  
  
 int client\_number = i + 1;  
 System.out.println("Enter name of client number " + client\_number);  
// String name = s.nextLine();  
 String name="";  
  
 name+=s.nextLine();  
 System.out.println("Select which type of account you want to open");  
 for (int j = 0; j < account\_type.length; j++) {  
  
 System.out.println(account\_type[j]);  
 }  
 String acc\_type = s.next();  
 System.out.println("Enter the opening balance in account of " + name);  
 int balance = s.nextInt();  
 int acc = accno\_generator();  
  
 System.out.println(acc\_type + " account of " + name + " is opened with a balance of Rs." + balance + " and Your account number is " + acc);  
  
 Bank b1 = new Bank(name, acc, balance, acc\_type);  
 clients.add(b1);  
 }  
 }  
  
 public static void editAccount() throws IOException  
 {  
 System.out.println("Please enter the account number for which you want to edit details");  
 int acc=s.nextInt();  
 s.nextLine();  
 System.out.println("Enter a new name for your account");  
 String new1=s.nextLine();  
 for(int i=0;i<clients.size();i++)  
 {  
 Bank b2=clients.get(i);  
 if(b2.getAccno()==acc)  
 {  
 b2.setName(new1);  
 System.out.println("Your updated account details are: \n"+ b2.toString());  
 }  
 }  
 }  
 public static void viewAccount() throws IOException {  
 System.out.println("Please Enter your name to view account details:");  
 String nm=s.next();  
  
 for(int i=0;i<clients.size();i++)  
 {  
 Bank b1= clients.get(i);  
 if(b1.getName().equalsIgnoreCase(String.valueOf(nm)))  
 {  
 System.out.println(b1.toString());  
 }  
 }  
 }  
  
 public static void transactions()  
 {  
 System.out.println("Please select which type of transaction you want to perform:");  
 System.out.println("1.Withdraw\n2.Deposit Money\n3.Transfer money to another account\n4. Pay utility Bills\n5.View Balance.");  
 int choice=s.nextInt();  
 switch(choice){  
 case 1: try{ Bank.withdraw\_money();  
 }  
 catch (Exception e)  
 {System.out.println(e);  
 }  
 break;  
 case 2: Bank.deposit\_money();  
 break;  
 case 3: Bank.transfer\_money();  
 break;  
 case 4: Bank.pay\_bills();  
 break;  
 case 5: Bank.view\_balance();  
 break;  
 default: System.out.println("Please enter a valid option.");  
 break;  
 }  
 }  
 public static void main(String args[]){  
  
  
 System.out.println("Welcome To The Banking System\nPlease choose an option:");  
 openAccount();  
 boolean c=true;  
 System.out.println("1.View my Account \n2.Edit my account details\n3.Do a transaction\n4.Exit");  
 int choice = s.nextInt();  
 while(c) {  
  
 switch (choice) {  
 case 1:  
 try {  
 viewAccount();  
 } catch (Exception e) {  
 System.out.println(e);  
 }  
 System.out.println("1.View my account \n2.Edit my account details\n3.Do a transaction\n4.Exit");  
 choice = s.nextInt();  
 break;  
 case 2:  
 try {  
 editAccount();  
 } catch (Exception e) {  
 System.out.println(e);  
 }  
 System.out.println("1.View my account \n2.Edit my account details\n3.Do a transaction\n4.Exit");  
 choice = s.nextInt();  
 break;  
  
 case 3:  
 transactions();  
 System.out.println("1.View my account \n2.Edit my account details\n3.Do a transaction\n4.Exit");  
 choice = s.nextInt();  
 break;  
 case 4: c=false;  
 System.out.println("Thank You for using our Banking system!");  
 break;  
 default:  
 System.out.println("Please choose a valid option");  
  
 }  
 }  
  
 for (int i = 0; i < clients.size(); i++) {  
 Bank b2 = clients.get(i);  
 //String s1 = "\nName : " + b2.getName() + " , Account Number : " + b2.getAccno() + " , Balance : " + b2.getBalance() + " , Account Type : " + b2.getAcc\_type();  
 String s1=b2.toString();  
 try {  
 usingBufferedWritter(s1+"\n");  
 } catch (Exception e) {  
 System.out.println(e);  
 }  
  
 }  
  
 }  
}

**//Bank.java**

import java.io.\*;  
import java.util.Scanner;  
  
class Bank{  
 static Scanner s=new Scanner(System.in);  
 private String name;  
 private int accno;  
 private int balance;  
 private String acc\_type;  
  
 @Override  
 public String toString() {  
 return  
 "name='" + name + '\'' +  
 ", accno=" + accno +  
 ", balance=" + balance +  
 ", acc\_type='" + acc\_type + '\'';  
 }  
  
 public void setAccno(int accno) {  
 this.accno = accno;  
 }  
  
 public void setBalance(int balance) {  
 this.balance = balance;  
 }  
  
 public void setAcc\_type(String acc\_type) {  
 this.acc\_type = acc\_type;  
 }  
  
 public Bank()  
 {  
 this.name = name;  
 this.accno = accno;  
 this.balance = balance;  
 this.acc\_type=acc\_type;  
 }  
 public Bank(String name, int accno, int balance,String acc\_type) {  
 this.name = name;  
 this.accno = accno;  
 this.balance = balance;  
 this.acc\_type=acc\_type;  
 }  
  
 public int getAccno() {  
 return accno;  
 }  
  
 public int getBalance() {  
 return balance;  
 }  
  
 public String getName() {  
 return name;  
 }  
 public String getAcc\_type()  
 {  
 return acc\_type;  
 }  
  
 public void setName(String name) {  
 String hs=this.name;  
 this.name = name;  
 modifyFile("append.txt",hs,this.name);  
 }  
  
 static void modifyFile(String filePath, String oldString, String newString)  
 {  
 File fileToBeModified = new File(filePath);  
  
 String oldContent = "";  
  
 BufferedReader reader = null;  
  
 FileWriter writer = null;  
  
 try  
 {  
 reader = new BufferedReader(new FileReader(fileToBeModified));  
  
 //Reading all the lines of input text file into oldContent  
  
 String line = reader.readLine();  
  
 while (line != null)  
 {  
 oldContent = oldContent + line + System.lineSeparator();  
  
 line = reader.readLine();  
 }  
  
 //Replacing oldString with newString in the oldContent  
  
 String newContent = oldContent.replaceAll(oldString.toLowerCase(), newString);  
  
 //Rewriting the input text file with newContent  
  
 writer = new FileWriter(fileToBeModified);  
  
 writer.write(newContent);  
 }  
 catch (IOException e)  
 {  
 e.printStackTrace();  
 }  
 finally  
 {  
 try  
 {  
 //Closing the resources  
  
 reader.close();  
  
 writer.close();  
 }  
 catch (IOException e)  
 {  
 e.printStackTrace();  
 }  
 }  
 System.out.println("Your details have been updated !");  
 }  
 public static void withdraw\_money() throws IOException  
 {  
 System.out.println("Enter your account number");  
 int acc=s.nextInt();  
 System.out.println("Enter the amount you want to withdraw");  
 int am=s.nextInt();  
 for (int i = 0; i < Main.clients.size(); i++) {  
 Bank b2 = Main.clients.get(i);  
 if(b2.getAccno()==acc)  
 {  
 if(b2.getBalance()<am)  
 {  
 System.out.println("Sorry, you do not have sufficient Balance");  
 }  
 else{  
 b2.setBalance(b2.getBalance()-am);  
 }  
 System.out.println("You have succeddfully withdrawn the money\n Your updated account details are "+ b2.toString());  
 }  
 }  
 }  
 public static void deposit\_money()  
 {  
 System.out.println("Enter your account number");  
 int acc=s.nextInt();  
 System.out.println("Enter the amount you want to deposit");  
 int am=s.nextInt();  
 for (int i = 0; i < Main.clients.size(); i++) {  
 Bank b2 = Main.clients.get(i);  
 if(b2.getAccno()==acc)  
 {  
 String s2=b2.toString();  
 b2.setBalance(b2.getBalance()+am);  
 System.out.println("You have succeddfully deposited the money\n Your updated account balance is"+ b2.getBalance());  
 // modifyFile("append.txt",s2,b2.toString());  
 }  
 }  
  
 }  
 public static void transfer\_money()  
 {  
 System.out.println("Enter your account number");  
 int acc1=s.nextInt();  
 System.out.println("Enter the account number to which you want to transfer");  
 int acc2=s.nextInt();  
 System.out.println("enter the amount you want to transfer");  
 int am=s.nextInt();  
  
 String ac1="";  
 for (int i = 0; i < Main.clients.size(); i++) {  
 Bank b2 = Main.clients.get(i);  
 if(b2.getAccno()==acc1)  
 {  
 if(b2.getBalance()<am)  
 {  
 System.out.println("Sorry you dont have suffiecient balance");  
 break;  
 }  
 else{  
 b2.setBalance(b2.getBalance()-am);  
 ac1=b2.toString();  
 }  
  
 }  
 if(b2.getAccno()==acc2)  
 {  
 b2.setBalance(b2.getBalance()+am);  
  
 System.out.println("You have successfully transfered money. Updated accounts are:\n"+ac1+"\n"+b2.toString());  
 }  
 }  
  
  
 }  
 public static void pay\_bills()  
 {  
 System.out.println("Please select what type of bill you want to pay:\n1. Electricy Bill\n2. DTH bill\n3. Mobile Reacharge");  
 int choice=s.nextInt();  
 switch(choice)  
 {  
 case 1: bill();  
 break;  
 case 2:bill();  
 break;  
 case 3:bill();  
 break;  
 default: System.out.println("Please choose a valid option");  
 }  
 }  
 public static void bill()  
 {  
 System.out.println("Enter your account number from which you want to pay the bill");  
 int acc=s.nextInt();  
 System.out.println("Enter the amount of your bill");  
 int bill=s.nextInt();  
 for(int i = 0; i< Main.clients.size(); i++)  
 {  
 Bank b2= Main.clients.get(i);  
 if(b2.getAccno()==acc)  
 {  
 if(b2.getBalance() < bill)  
 {  
 System.out.println("Sorry you dont have enough balance to pay the bill!");  
 }  
 else{  
 b2.setBalance(b2.getBalance()-bill);  
 System.out.println("You have successfully paid your bill! Your update balance is Rs."+ b2.getBalance());  
 }  
 }  
 }  
 }  
 public static void view\_balance()  
 {  
 System.out.println("Please enter your account number to view you balance");  
 int acc=s.nextInt();  
 for(int i = 0; i< Main.clients.size(); i++)  
 {  
 Bank b2= Main.clients.get(i);  
 if(b2.getAccno()==acc)  
 {  
 System.out.println("Your balance is Rs."+b2.getBalance());  
 }  
 }  
 }  
}