

5. Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class Account that stores customer name, account number and type of account. From this derive the classes Curr-acct and Sav-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks: • Accept deposit from customer and update the balance. • Display the balance. • Compute and deposit interest • Permit withdrawal and update the balance • Check for the minimum balance, impose penalty if necessary and update the balance

```
import java.util.*;

class Account{
    Scanner in=new Scanner(System.in);
    String cusName,accType;
    long accNumber;
    double balance=9876.5;
    void Accept(){
        System.out.println("Enter name ");
        cusName=in.nextLine();
        System.out.println("Enter Account number");
        accNumber=in.nextLong();
    }
    void deposit(){
        int dep;
        System.out.println("Enter the amount to be deposited");
        dep=in.nextInt();
        balance+=dep;
        System.out.println("Balance = "+balance);
    }
    void withdrawal(){
        int witdr;
        System.out.println("Enter the amount you want to withdraw");
        witdr=in.nextInt();
        balance-=witdr;
        System.out.println("Balance = "+balance);
    }
}

class CurrAct extends Account{
    void penalty(){
        if(balance<2000){
            balance-=400;
            System.out.println("400 penalty for maintainin less than minimum balance");
            System.out.println("Balance = "+balance);
        }
    }
}
```

```

    }
}
}
class SavAct extends Account{
    void interest(){
        double i;
        i=balance*0.05;
        balance+=i;
        System.out.println("Interest = "+i);
        System.out.println("Total Balance = "+balance);
    }
}
class Bank{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter your choice\n1. Savings Account \n2.Current Account");
        int choice=sc.nextInt();

        CurrAct c= new CurrAct();
        SavAct s= new SavAct();

        if(choice==2){
            c.Accept();

            System.out.println("Enter your choice\n1. Deposit\n2. Withdraw");
            int n= sc.nextInt();

            switch (n) {
                case 1:{
                    c.deposit();
                    break;
                }
                case 2:{
                    c.withdrawal();
                    c.penalty();
                    break;
                }
                default: System.out.println("Wrong choice!");
            }
        }
        if(choice==1){
            s.Accept();

            System.out.println("Enter your choice\n1. Deposit\n2. Withdraw");
            int n=sc.nextInt();

            switch (n) {
                case 1:{

```

```

        s.deposit();
        s.interest();
        break;
    }
    case 2:{
        s.withdrawal();

        break;
    }
    default: System.out.println("Wrong choice!");
}
}
}
}
}

```

output:

```

PROBLEMS 23 OUTPUT DEBUG CONSOLE TERMINAL 2: Java Debug Console
bash-5.0$ /Library/Java/JavaVirtualMachines/jdk-15.jdk/Contents/Home/bin/java -agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:61844 --enable-preview -XX:+ShowCodeDetails InExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/adityaprakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt_ws/java_895310d3/bin"
Bank
Enter your choice
1. Savings Account
2. Current Account
1
Enter name
rahul
Enter Account number
758595858
Enter your choice
1. Deposit
2. Withdraw
1
Enter the amount to be deposited
1000000
Balance = 1009876.5
Interest = 50493.825000000004
Total Balance = 1060370.325
bash-5.0$

```