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 Cur-acct and Sav-acct to make them more specific to their requirements. Include all the necessary methods in order to achieve the following tasks:

a) Accept deposit from customer and update the balance.
b) Display the balance.
c) Compute and deposite interest
d) Permit withdrawal and update the balance

Check for the minimum balance, impose penalty if necessary and update the balance.

~~Complete the of~~

```
import java.util.*;
import java.lang.Math;
class bank {
Scanner sc = new Scanner(System.in);
String name;
int acc-no;
float bal. si;
```

```
Void accept () {
 System.out.println ("Enter your name");
 name = sc.nextline();
 System.out.println ("Enter the balance amount");
 bal = sc.nextfloat();
 }
 Void display () {
 System.out.println ("Name : " + name);
 }
 Void deposit () {
 float amount;
 int choice;
 System.out.println ("Do you want to deposit (1 for yes,
                                                & for no)")
 choice = sc.nextInt();
 if (choice == 1) {
 System.out.println ("Enter the amount to be deposited");
 amount = sc.nextfloat();
 if (amount > bal) {
 System.out.println ("Amount in bank insufficient");
 }
 else {
 bal = bal + amount;
 }
 System.out.println ("Current balance : " + bal);
 }
 }
}
```

```
class current extends bank {
    int service_fee = 50;
    void cheque() {
    System.out.println ("Cheque Service available");
}
void withdrawal () {
float amt;
System.out.println ("Enter the amount to be withdrawn");
amt = sc.nextfloat();
if (amt > bal)
System.out.println ("Balance insufficient");
else {
bal = bal - amt;
if (bal < 1000) {
bal = bal - service_fee;
System.out.println ("50rs is taken as service fee");
}
System.out.println ("Withdrawn : " + amt);
System.out.println ("Current balance : " + bal);
}
}
}
class Savings extends bank {
void cheque() {
System.out.println ("Cheque service not available");
}
```

```
Void withdrawal (){
 float amt;
 System.out.println ("Enter the amount to be withdrawn");
 amt = sc.nextfloat();
 if (amt > bal)
  System.out.println ("Balance insufficient");
 else
  bal = bal - amt;
  System.out.println ("Withdrawn : " + amt);
  System.out.println ("Current balance : " + bal);
}
Void interest (){
 System.out.println ("Enter the rate of interest");
 int n = sc.nextInt();
 System.out.println ("Enter the time elapsed");
 int t = sc.nextInt();
  si = bal*(1+(r/n));
  System.out.println ("Compound interest is " + (Math.pow(si,
                                                  n*t)));
}
}
public class account{
  public static void main (String args[]){
  Public static
   Scanner sc = new Scanner (System.in);
   Saving obj1 = new Savings();
   current obj2 = new current();
System.out.println ("\n1 Savings account \n2. Current accant");
  int choice = sc.nextInt();
```

```
switch (choice){
case 1: obj1.accept();
        obj1.display();
        obj1.cheque();
        obj1.deposit();
        obj1.interest();
        obj1.withdrawal();
        break;

case 2: obj2.accept();
        obj2.display();
        obj2.cheque();
        obj2.deposit();
        obj2.withdrawal();
        break;
default: System.out.println("Invalid choice");
    }
}
}
```

Output:

```
1.Savings account
2.Current account
1
Enter your name
Dhavan SK
Enter the balance amount
10000
Name : Dhavan SK
Cheque service not available
Do you want to deposit(1 for yes ,2 for no)
1
Enter the amount to be deposited
5000
Current balance : 15000.0
Enter the rate of interest
5
Enter the number of times interest applied per time period
2
Enter the time elapsed
5
Compound interest is 3.4050628916015623E46
Enter the amount to be withdrawn
4000
Withdrawn : 4000.0
Current balance : 11000.0
```