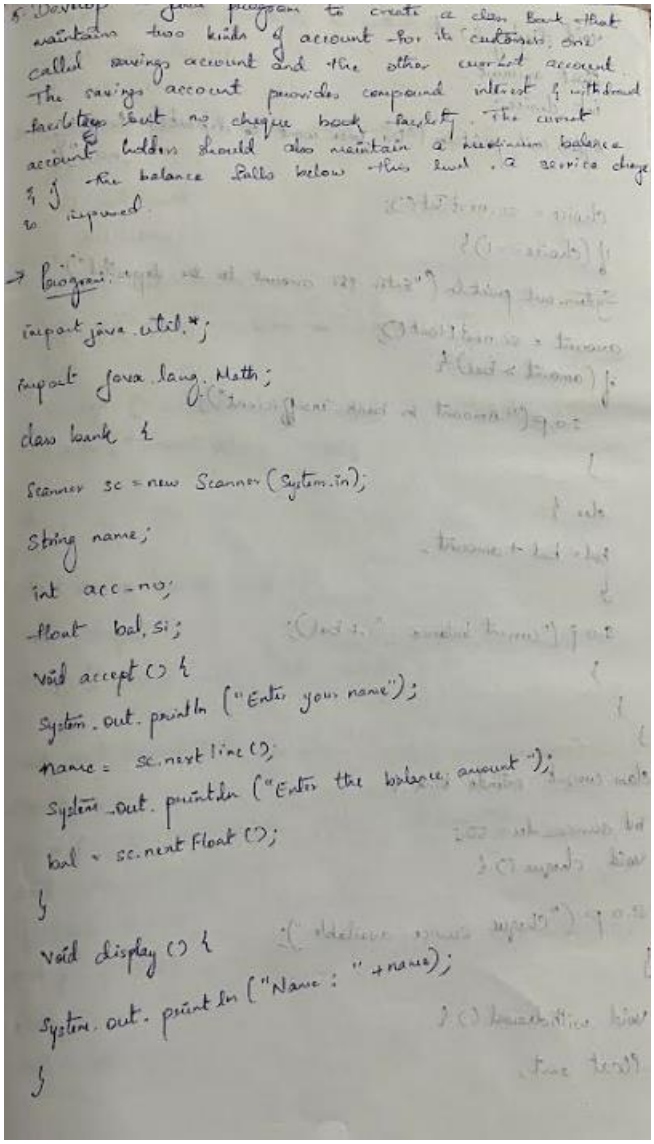
Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book 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 the necessary methods in order to achieve the following tasks:

a) Accept deposit from customer and update the balance.

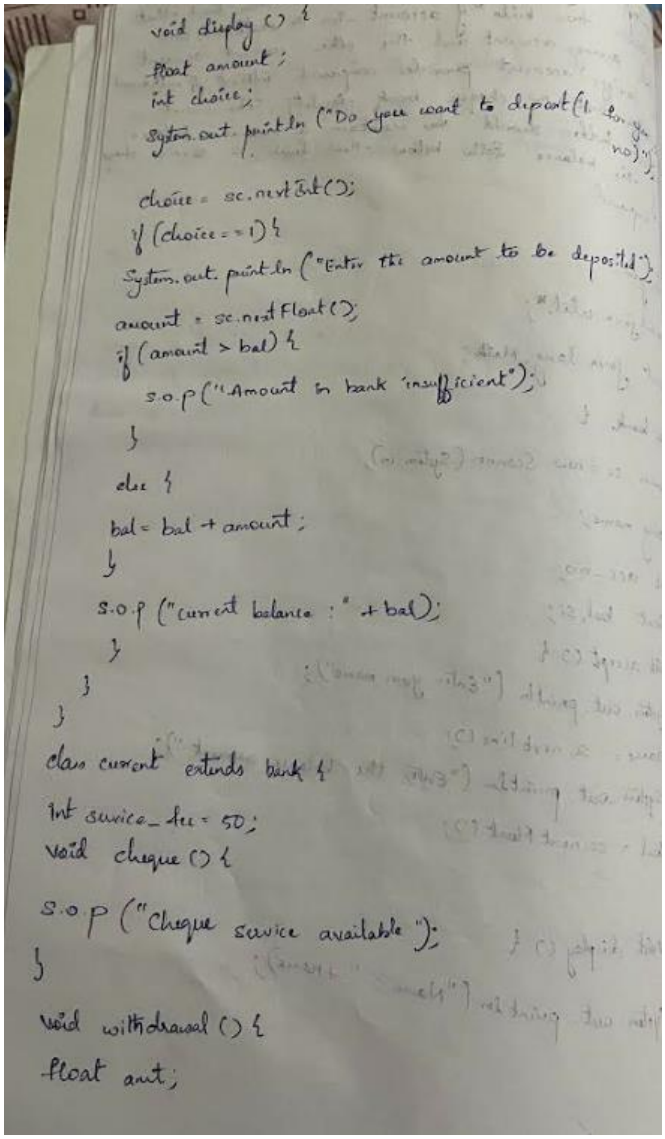
b) Display the balance.

c) Compute and deposit interest

d) Permit withdrawal and update the balance Check for the minimum balance, impose penalty if necessary and update the balance.



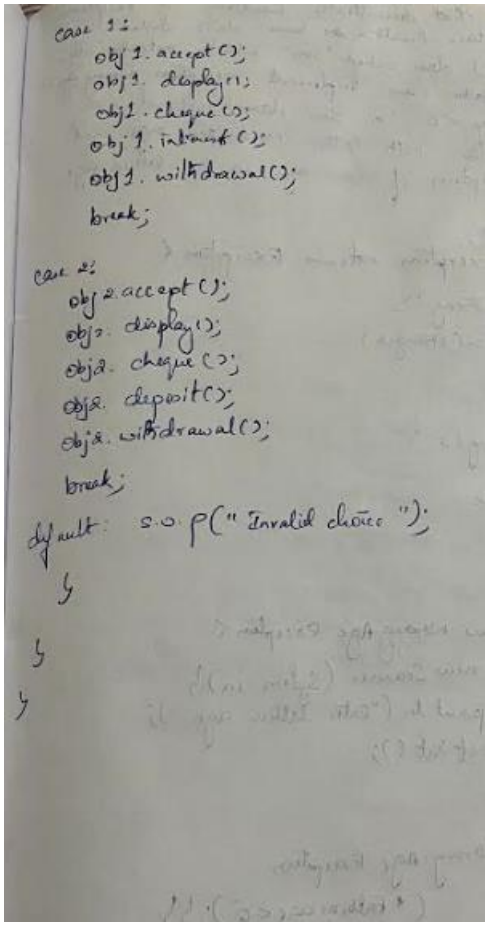
```
maintains two kinds of account for its customers, one
called savings account and the other current account
The savings account provides compound interest & withdrawal
facilities but no cheque book facility. The current
account holder should also maintain a minimum balance
& if the balance falls below this level, a service charge
is imposed

→ Program:

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 display () {
    float amount;
    int choice;
    System.out.println ("Do you want to deposit(1 for yes/2 for no)");
    choice = sc.nextInt();
    if (choice == 1) {
    System.out.println ("Enter the amount to be deposited");
    amount = sc.nextFloat();
    if (amount > bal) {
      s.o.p ("Amount in bank insufficient");
    }
    else {
    bal = bal + amount;
    }
    s.o.p ("current balance : " + bal);
    }
  }
}
class current extends bank {
int service_fee = 50;
void cheque () {
s.o.p ("Cheque service available");
}
void withdrawal () {
float amt;
```

```
s.o.p ("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;
  s.o.p ("50 rs is taken as service fee ");
}
s.o.p ("Withdrawn : " + amt);
s.o.p ("Current Balance : " + bal);
}
}
}
class saving extends bank {
void cheque () {
s.o.p ("Cheque service not available");
}
void withdrawal () {
float amt;
s.o.p ("Enter the amount to be withdrawn");
amt = sc.nextFloat();
if (amt > bal)
s.o.p ("Balance insufficient");
else
bal = bal - amt;
```

```
s.o.p ("withdrawn: " + amt);
s.o.p ("current balance: " + bal);
}
void interest () {
s.o.p ("Enter the rate of interest ");
int r = sc.nextInt ();
s.o.p (" Enter the no. of times interest applied per time period");
int n = sc.nextInt ();
s.o.p ("Enter the time elapsed");
int t = sc.nextInt ()
si = bal * (1 + (r/n));
s.o.p (" compound interest is " + (Math.pow (si, n*t)));
}
}
ublic class account {
psvm (String args []) {
Scanner sc = new Scanner (System.in);
savings obj1 = new savings ();
current obj1 = new current ();
o.p ("In 1. savings account In 2. current account ");
choice = sc.nextInt ();
tch (choice) {
```



```
case 1:
    obj1.accept();
    obj1.display();
    obj1.cheque();
    obj1.interest();
    obj1.withdrawal();
    break;

case 2:
    obj2.accept();
    obj2.display();
    obj2.cheque();
    obj2.deposit();
    obj2.withdrawal();
    break;
default: s.o.p("Invalid choice");
  }
 }
}
```

Ouput

```
1.Savings account
2.Current account
2
Enter your name
ABC
Enter the balance amount
34000
Name : ABC
Cheque service available
Do you want to deposit(1 for yes ,2 for no)
1
Enter the amount to be deposited
45000
Amount in bank insufficient
Current balance : 34000.0
Enter the amount to be withdrawn
200
Withdrawn : 200.0
Current balance : 33800.0
```

```
1.Savings account
2.Current account
1
Enter your name
ABC
Enter the balance amount
25000
Name : ABC
Cheque service not available
Do you want to deposit(1 for yes ,2 for no)
1
Enter the amount to be deposited
43000
Amount in bank insufficient
Current balance : 25000.0
Enter the rate of interest
4
Enter the number of times interest applied per time period
45
Enter the time elapsed
33
Compound interest is Infinity
Enter the amount to be withdrawn
7000
Withdrawn : 7000.0
Current balance : 18000.0
```