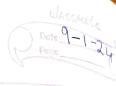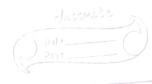8) Develop a java program to create a class Bank that maintains two kinds of account for its customers, one called savings Account and the other current account. The savings account provides compound interest and withdrawal facility but no cheque book facility. The current account provides cheque book 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.

```java
import java.util.*;
class account
{
    String name;
    int accnum;
    String typeacc;
    double balance;
    account(String name, int accnum, String typeacc, double balance)
    {
        this.name = name;
        this.accnum = accnum;
        this.typeacc = typeacc;
        this.balance = balance;
    }

    public void deposit(double amount)
    {
        balance += amount;
        System.out.println("Deposit Successful. Updated balance :" + balance);
    }

    public void withdraw(double amount)
```
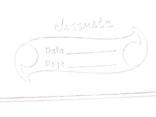
```java
        }
        if (balance - amount >= 0)
        {
                balance -= amount;
                System.out.println("The balance after
                withdrawal is :" + balance);
        }

        else
        {
                System.out.println("Insufficient funds");
        }
    }
    public void display()
    {
        System.out.println("Name :" + name + "Account name:"
                        + accnum + "Type :" + typeacc + "Balance:"
                                        + balance);
    }
}
class savacct extends account
{
    private double rate = 10;
    savacct(String name, int accnum, String typeacc, double balance)
    {
        super(name, accnum, typeacc, balance);
    }
    public void interest()
    {
        balance += balance * (rate/100);
        System.out.println("The balance after applying an
        interest is :" + balance);
    }
}
```

```java
}
class curracct extends account
{

    private double minbal = 500;
    private double service = 10;
    curracct (String name, int accnum, String typeacc, double
                balance)
    {
        super (name, accnum, typeacc, balance);
    }
    public void check(double balance)
    {
        if (balance < minbal)
        {
            balance -= service;
            System.out.println("Service charge is imposed
            since balance is below min bal of 500");
            System.out.println("balance after service charge:"
                        +balance);
        }
        else
        {
            System.out.println("No service charge imposed");
        }
    }
}
class bank
{
    public static void main (String args [])
    {
        Scanner s = new Scanner (System.in);
        System.out.println("Enter your name");
```

```
String name = s.next();
System.out.println("Enter your account number: ");
int accnum = s.nextInt();
System.out.println("Enter the type of account (Savings/curre
");
String typeacc = s.next();
System.out.println("Enter the current balance value");
double balance = s.nextDouble();
int ch;
double depamt, withamt;
account acc = new account(name, accnum, typeacc, balance);
Savacct sa = new savacct(name, accnum, typeacc, balance);
current cur = new current(name, accnum, typeacc, balance);
while (true)
{
    if (acc.typeacc.equals("Savings"))
    {
        System.out.println("\n menu\n 1.deposit 2.
        withdraw 3.compute interest 4.display 5.End loop");
        System.out.println("Enter the choice");
        ch = s.nextInt();
        switch (ch)
        {
            case 1:
                {System.out.println("enter the amount:");
                depamt = s.nextInt();
                sa.deposit(depamt);
                break;}

            case 2:
                {System.out.println("enter the amount:");
                withamt = s.nextInt();
                sa.withdraw(withamt);
                break;}
```

```java
                case 4:
                    {sa. display();
                    break;}
                case 5:
                    { System. exit(0);}


                default:
                    { System.out.println("invalid input"),
                    break;}
                }
            }
        else
        {
        System.out.println("\n Menu b1. Check penalty 2.Enr
                            loop");
        System.out.println("Enter the choice");
        ch = S.nextInt();
        switch (ch)
        {
            case 1:
                { cur.check(balance);
                break;}
            case 2:
                { System.exit(0);}
            default:
                { System.out.println("invalid input");
                break;}
            }
        }
    }
}
```

Output :

Enter your name
Shluk
Enter your account number.
123
Enter the type of account (Savings/Current)
Savings
Enter the current balance value
2000

Menu
1. deposit 2. withdraw 3. compute interest 4. display 5. end .
Enter the choice
1

Enter the amount "
100
Deposit successful. update balance : 2100.0

Menu
1. deposit 2. withdraw 3. compute interest 4. display 5. end loop
Enter the choice
2

Enter the amount :
3000
Insufficient funds
Menu
1. deposit 2. withdraw 3. compute interest 4. display 5. end loop
Enter choice
3

The balance after applying an interest : 2310.0

for current account

Enter your name
Shlok
Enter your account number:
123
Enter the type of account (Savings/Current)
Current
Enter the current balance value
200
Menu
   1. Check penalty   2. end loop
Enter the choice
1
Service charge is imposed since your balance is below
minimum balance of 500
balance after service charge : 190.0

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