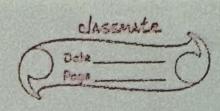## LAB-5

Q5) import java.util.Scanner, 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 account current account. The savings account provides compound interest and with drawal 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 task

a) Accept Deposit from customer and update the balance

b) Display the balance.

c) Compute and deposit interest

c) Permit withdrawal and update the balance

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

1)
```java
import java.util.scanner

class Account {
    protected String customerName;
    protected int     account Number,
    protected double  balance,


    public Account( String customerName, int
    accountNumber, double balance) {
        this.customerName = customerName;
        this.accountNumber = accountNumber;
        this.balance     = balance;
    }


    public void displayBalance() {
    public void deposit (double amount) {
        if (amount > 0) {
            balance += amount;
            System.out.printh("Deposited:" + amount),
        } else {
            System.out.printh("Invalid deposit amount"),
        }
    }


    public void displayBalance() {
```
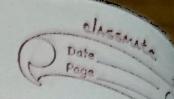
```java
        System.out.println("Balance:" + Balance);
    }
}


class SavAcct extends Account {
    private double interestRate;

    public SavAcct(String customerName, int accountnumb
                    double balance, double interestRate){
        super(customerName, int accountNumber, double
        balance, double interestRate){
        super(customerName, accountNumber, balance)
        this.interestRate = interestRate;
    }


    public void computeAndDepositInterest(){
        double interest = balance * (interestRate / 100);
        balance += interest;
        System.out.println("Interest added:" + interest);
    }


    public void withdraw(double amount){
        if (amount <= balance){
            balance -= amount;
            System.out.println("Withdrawn:" + amount)
```
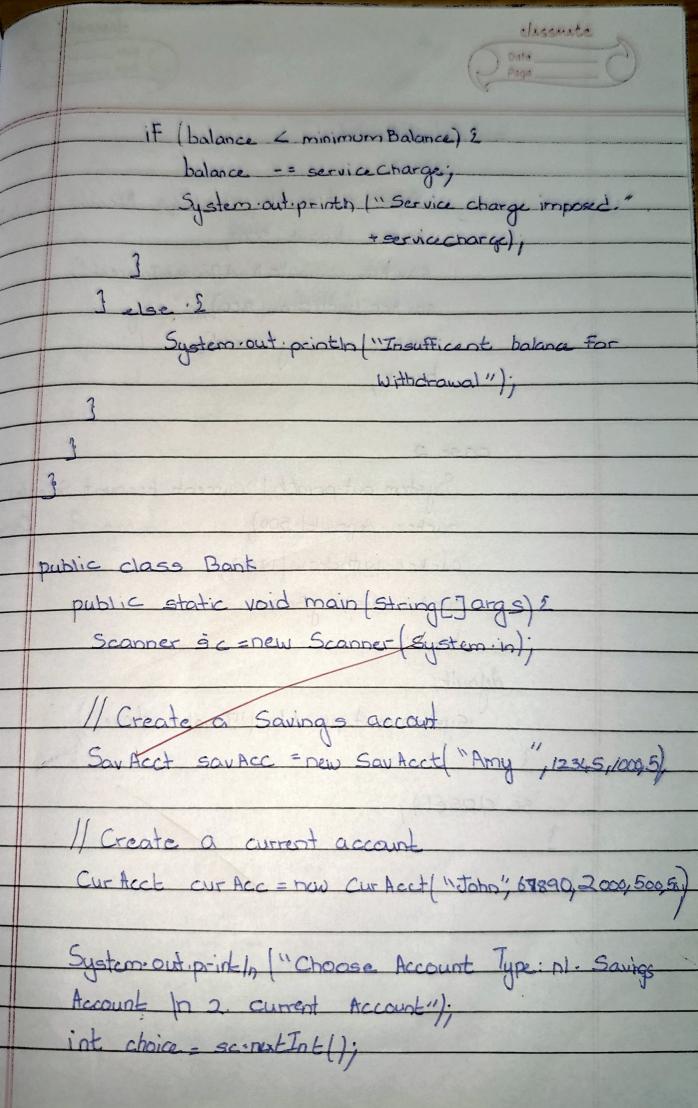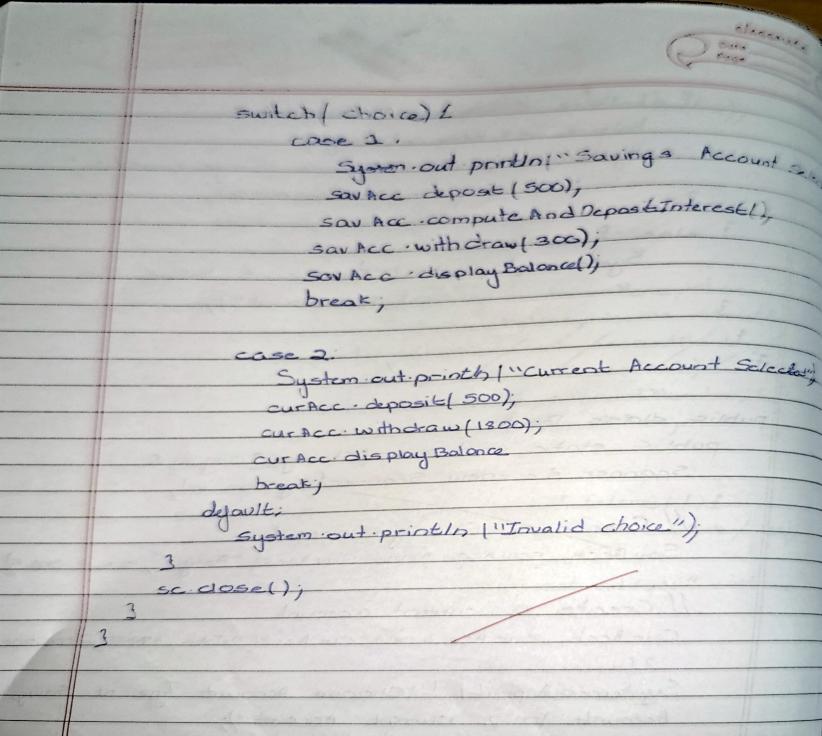
```java
            if (balance < minimumBalance) {
                balance -= serviceCharge;
                System.out.println("Service charge imposed."
                        + serviceCharge);
            }
        } else {
            System.out.println("Insufficient balance for
                    withdrawal");
        }
    }
}

public class Bank
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);

        // Create a Savings account
        SavAcct savAcc = new SavAcct("Amy ",12345,1000,5);

        // Create a current account
        CurAcct curAcc = new CurAcct("John",67890,2000,500,5);

        System.out.println("Choose Account Type: n1. Savings
        Account \n 2. current Account");
        int choice = sc.nextInt();
```

```java
switch( choice) {
    case 1:
        System.out.println(" Savings   Account S.
        savAcc.deposit(500);
        savAcc.computeAndDepositInterest();
        savAcc.withdraw(300);
        savAcc.displayBalance();
        break;

    case 2:
        System.out.println(" Current  Account Selected"
        curAcc.deposit(500);
        curAcc.withdraw(1300);
        curAcc.displayBalance
        break;
    default:
        System.out.println("Invalid choice.");
}

sc.close();
}
}
```

Output :

Choose Account Type:

1. Savings ~~Count~~ Account

2. Current Account

1

Savings Account Selected

Deposited : 500·0

Interest added: 75·0

Withdrawan : 300·0

Balance: 1275·0


→2) Program: