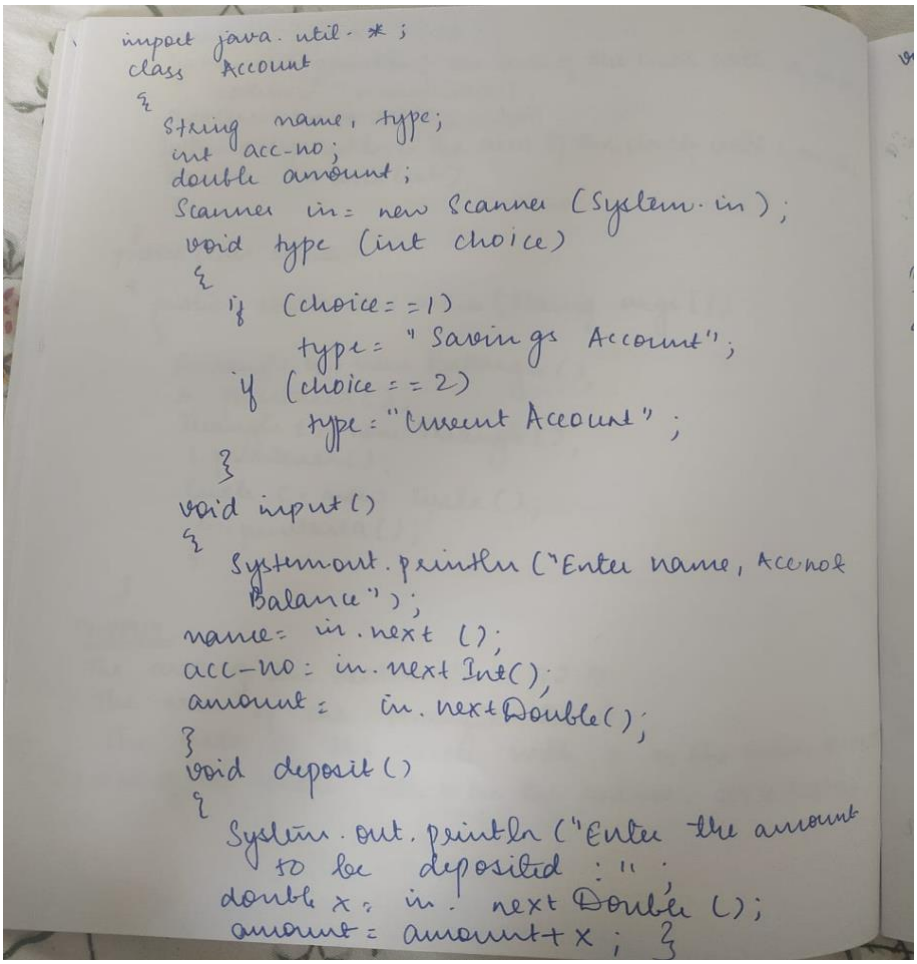
LAB PROGRAM 5:

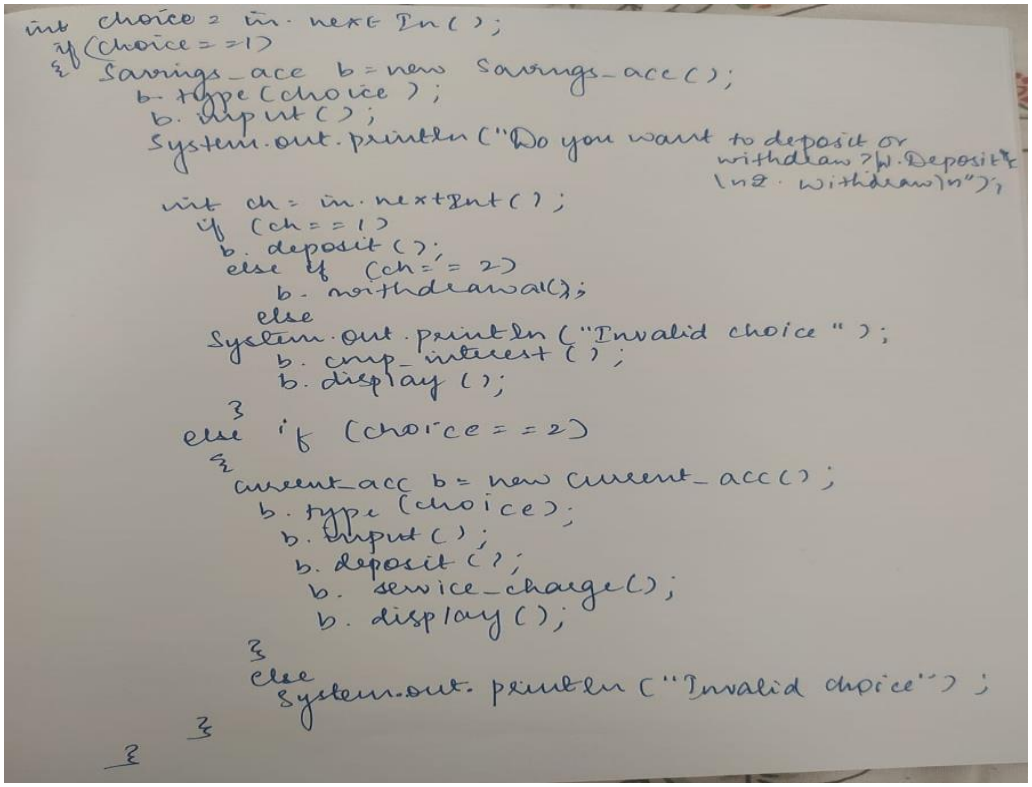
Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book 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
{
  String name, type;
  int acc-no;
  double amount;
  Scanner in = new Scanner (System.in);
  void type (int choice)
  {
    if (choice==1)
      type = "Savings Account";
    if (choice==2)
      type = "Current Account";
  }
  void input()
  {
    System.out.println("Enter name, Accnot
      Balance");
  name = in.next();
  acc-no = in.nextInt();
  amount = in.nextDouble();
  }
  void deposit()
  {
    System.out.println("Enter the amount
      to be deposited :");
    double x; in.nextDouble();
    amount = amount+x; }
```

```
void display()
{
  System.out.println("Name : " +name);
  System.out.println("Account Number: "+acc_no);
  System.out.println("Type : "+type);
  System.out.println("Balance : "+amount);
}
}
class savings_acc extends Account
{ double a, cinterest;
  int r,t;
  Scanner in = new Scanner(System.in);
  void withdrawal()
  {
    System.out.println("Enter amount to be withdrawn");
    double amtw=in.nextDouble();
    if (amtw<=amount)
      amount=amount-amtw;
    else
      System.out.println("Invalid amount");
  }
  void cmp_interest()
  { System.out.println("Enter the rate & time:");
    r=  in.nextInt();
    t=  in.nextInt();
    a= amount* Math.pow(1+ r*0.01),t);
    cinterest = a- amount;  }
```

```
void display()
{
  super.display();
  System.out.println("Compound Interest after"+t+"years:"
                     +cinterest);
  System.out.println("Amount after "+t""years:"+a);
}}
class Current_acc extends Account
{
  double min=10000;
  void input()
  {
    super.input();
  }
  void service_charge()
  {
    if (amount<min)
      amount=amount-500;
  }
  void display()
  {
    super.display();
  }
}
class ~~Main~~ Bankdemo
{ public static void main(String args[])
  {
    Scanner in= new Scanner(System.in)
    System.out.println("Choose type of account:\n
    1. Savings account\n 2. Current Account");
```



```
int choice = in.nextInt();
if(choice==1)
{
  Savings_acc b = new Savings_acc();
    b.type(choice);
    b.input();
    System.out.println("Do you want to deposit or
                        withdraw?1.Deposit
                        \n2. Withdraw\n");

    int ch = in.nextInt();
      if (ch==1)
       b.deposit();
       else if (ch==2)
          b.withdrawal();
         else
       System.out.println("Invalid choice");
          b.cmp_interest();
          b.display();
    }
  else if (choice==2)
    {
     current_acc b = new current_acc();
      b.type(choice);
       b.input();
       b.deposit();
        b.service_charge();
        b.display();
    }
    else
      System.out.println("Invalid choice");
  }
}
```