(5) Program :

```
import java.util.Scanner; import java.lang.Math
class Account{
    String name;
    long accno;
    String acctype;
}

class SavAcct extends Account{
    double bal, interest_rate = 0.04;
    SavAcct (String nam, string long accnum
        name = nam;
        accno = accnum;
        bal = start;
        acctype = "savings";
    }
```

```
        bal += amount;
    }
    double withdraw(double amount){
        bal -= amount;
        return amount;
        if(bal< min_ami
        return amount;
    }
    double addInterest(double time){
        bal = bal*(1+interest_rate/(tim
        bal = bal*pow((1+interest_rate/4
    }
}
class CurrAcct extends Account{
    double bal, charge_rate = 0.05, min_a
    CurrAcct(String nam, long acenum, doubl
        acctype = "current";
        bal = start;
        name = nam;
        acno = acnum;
    }
    boolean chequeBook = true;
    void deposit(double amount){
        bal += amount;
    }
    double withdraw(double amount){
```

```
        bal = bal - charge_rate * bal;
    }
}

public class Bank{
    public static void main(String[] arg
        SavAcct sav = new SavAcct("Agneya
                                  1,3000);
        CurAcct cur = new CurAcct("Agneya
        Scanner reader = new Scanner(System.i
        System.out.println("Opening a Savin
        System.out.println("Enter your nam
        String name = reader.nextLine();
        System.out.println("Account number
        long acnum = reader.nextLong();
        System.out.println("Initial deposit:")
        double start = reader.nextDou
        SavAcct sav = new SavAcct(name, acu
        System.out.println("Opening a curren
        System.out.println("Enter yourn name
        name = reader.nextLine();
        System.out.println("Account number
        acnum = reader.nextLong();
        System.out.println("Initial deposit")
        start = reader.nextDouble();
        CurAcct cur = new CurAcct(nam
```

```
        cur.deposit(double);
        System.out.println("Withdrawing 200
        Savings account");
        sav.withdraw(2000);
        System.out.println("Withdrawing "+(amo
        "from current account");
        cur.withdraw(amount+2000.1);
        System.out.println("How many yea
        passed since depositing in the sa
        account?: );
        double years = reader.nextDouble
        sav.addInterest(years);
        System.out.println("Amount in savi
                + sav.bal);
        System.out.println("Amount in curr
                + cur.bal);
    }
}
```

Algorithm:

step 1: Start

step 2: Prompt the user for name of h
holder, account number and in
and create two objects sav (
and cur (of type CurAcct)

step 3: Deposit ~~2000~~ amount to savings accoun

sav. withdraw (2000)

step 8: sav. bal -= 2000

step 9: withdraw amount + 2001 from account by calling cur. withdraw

step 10: cur. bal -= amount (here amount par ameter)

step 11: charge service charge for goi the minimum balance by de charge rate from cur. bal.

step 12: prompt the user for number since depositing in the savi

step 13: Add the compound interest by performing bal = bal (1 + interes

step 14: Display balances of both ac

step 15: End.

Output:

Opening savings account!
Enter your name:
Agneya
Account number:
1
Initial deposit:
3000
Opening current account!
Account number:
2

500
Withdrawing 2000 from sav
Withdrawing 2501.0 from cur
Enter no. of years since depositing in Sav:
Amount in Savings account = 1849.807353
Amount in current account = 949.05
1BM22CS024 Agneya D A

```
PS C:\Users\bmsce\Desktop\1BM22CS024\lab 4> cd "c:\Users\bm
Opening a savings account!
Enter your name:
Agneya
Account number:
1
Initial deposit:
3000
Opening a current account!
Account number:
2
Initial deposit:
3000
What amount should be deposited to the Savings acccount?
400
What amount should be deposited to the current acccount?
500
Withdrawing 2000 from sav
Withdrawing 2501.0 from cur
Enter the no. of years since depositing in sav:
7
Amount in savings account = 1849.8073536575516
Amount in current account = 949.05
1BM22CS024 Agneya D A
PS C:\Users\bmsce\Desktop\1BM22CS024\lab 4>
```