```
import java.util.Scanner;
abstract class Account {
  String customerName;
  String accountNumber;
  double balance;
  String accountType;
  public Account(String customerName, String accountNumber, String accountType, double balance)
{
    this.customerName = customerName;
    this.accountNumber = accountNumber;
    this.accountType = accountType;
    this.balance = balance;
  }
  public void deposit(double amount) {
    if (amount > 0) {
      balance += amount;
      System.out.println("Deposit successful. New balance: " + balance);
    } else {
      System.out.println("Invalid deposit amount.");
    }
  }
  public void displayBalance() {
    System.out.println("Account Balance: " + balance);
  }
  public abstract void withdraw(double amount);
  public abstract void updateBalance();
}
class CurAcct extends Account {
  private static final double MINIMUM BALANCE = 1000;
  private static final double SERVICE_CHARGE = 50;
  public CurAcct(String customerName, String accountNumber, double balance) {
    super(customerName, accountNumber, "Current", balance);
  }
  public void withdraw(double amount) {
    if (balance - amount >= 0) {
      balance -= amount;
      System.out.println("Withdrawal successful. New balance: " + balance);
      updateBalance();
    } else {
```

```
System.out.println("Insufficient balance.");
    }
  }
  public void updateBalance() {
    if (balance < MINIMUM BALANCE) {
      balance -= SERVICE_CHARGE;
      System.out.println("Service charge imposed due to low balance. New balance: " + balance);
    }
  }
}
class SavAcct extends Account {
  private static final double INTEREST_RATE = 0.05;
  public SavAcct(String customerName, String accountNumber, double balance) {
    super(customerName, accountNumber, "Savings", balance);
  }
  public void computeInterest() {
    double interest = balance * INTEREST_RATE;
    balance += interest;
    System.out.println("Interest computed and added. New balance: " + balance);
  }
  public void withdraw(double amount) {
    if (balance - amount >= 0) {
      balance -= amount;
      System.out.println("Withdrawal successful. New balance: " + balance);
    } else {
      System.out.println("Insufficient balance.");
    }
  }
  public void updateBalance() {
    computeInterest();
  }
}
public class Bank {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    System.out.print("Enter Customer Name: ");
    String name = scanner.nextLine();
    System.out.print("Enter Account Number: ");
    String accNum = scanner.nextLine();
```

```
System.out.print("Enter Account Type (Savings/Current): ");
    String type = scanner.nextLine();
    System.out.print("Enter Initial Balance: ");
    double balance = scanner.nextDouble();
    Account account;
    if (type.equalsIgnoreCase("Savings")) {
      account = new SavAcct(name, accNum, balance);
    } else if (type.equalsIgnoreCase("Current")) {
      account = new CurAcct(name, accNum, balance);
    } else {
      System.out.println("Invalid Account Type.");
      scanner.close();
      return;
    }
    boolean quit = false;
    while (!quit) {
      System.out.println("\n1. Deposit\n2. Withdraw\n3. Display Balance\n4. Update Balance\n5.
Quit");
      System.out.print("Enter your choice: ");
      int choice = scanner.nextInt();
      switch (choice) {
        case 1:
           System.out.print("Enter amount to deposit: ");
           double depositAmount = scanner.nextDouble();
           account.deposit(depositAmount);
           break;
        case 2:
           System.out.print("Enter amount to withdraw: ");
           double withdrawAmount = scanner.nextDouble();
           account.withdraw(withdrawAmount);
           break;
        case 3:
           account.displayBalance();
           break;
        case 4:
           account.updateBalance();
           break;
        case 5:
           quit = true;
           break;
        default:
           System.out.println("Invalid choice. Please try again.");
      }
```

```
}
System.out.println("Thank you for banking with us.");
}
```

Enter Customer Name: Shreyas

Enter Account Number: 12234

Enter Account Type (Savings/Current): Savings

Enter Initial Balance: 1000000

- 1. Deposit
- 2. Withdraw
- 3. Display Balance
- 4. Update Balance
- 5. Quit

Enter your choice: 1

Enter amount to deposit: 10000

Deposit successful. New balance: 1010000.0

- 1. Deposit
- 2. Withdraw
- 3. Display Balance
- Update Balance
- 5. Quit

Enter your choice: 3

Account Balance: 1010000.0

- Deposit
- 2. Withdraw
- 3. Display Balance
- Update Balance
- 5. Quit

Enter your choice: 4

Interest computed and added. New balance: 1060500.0

- Deposit
- 2. Withdraw
- 3. Display Balance
- 4. Update Balance
- 5. Quit

Enter your choice: 5

Thank you for banking with us.

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Circle () for dint)
&. Develop a Java program to create a class Bank that maintains
    two kinds of account, one called savings and the other current account. The savings account provides compound interest and withdrawl facilities but no cheque facility. The current account provides
     cheque book facility but no interest!
   Create a class account that stores customer name, acc. number
   and type of account. From this derive classes curr-acct, soving-acct to make them more specific to their sequirements.
  Include the necessary methods in order to achieve the following tasks
   (a) Accept deposit from customer and update the balance
```

(b) Display the butance xxx . MANNO 32 .32

(c) compute the deposit suterest stime

(d) Permit withdrawl and update the balance -

import java. util . Scanner;

(do) significant Account francis si

String customer Name, account Number; double balance; String account Type :

DENTER 32 Public Account (string customaname, String accNo, String Accounttype, double balance)

this . customer Name = customer Name ;

: (1) Des Atring, + this account Number = account Number;

this . account Type - account Type;

this. balance = balance:

2. Triangle 3. Civole 1 public void deposit (double amount) {

if camount > 0) {

batance += amount ;

System. out. println ("Deposit Successful

Output =

3

ch

else f

System. out. println ("Invalid Deposit");

```
public void display Balance () {
System.out. println ("Account Balance: "+ balance);
          public abstract void withdraw (double amount);
      class curact extends Account {

private static final double Minimum - Balance = 10000;
       private static final double service charge = 50;
     public void current Acet ( Strling enstomer Name, double balance)

1. Super ( customer Name, account Number, "current", balance)
              public void withdraw (double amount) to
                       ef (balance-amount >=0) {
                                      balance - = amount;
                                     System. out. printin (" Withdraw Successful")
                 } ( spin [] prints ) updateBalance () indus
            scanner er = new Scoproston. in):
       (": amost somotions") System out, println ("Insufficient Balance");
              public voids update Balance ()
     : (": radinis true sollif") (Balance , K. Minimum_Balance) {
               E () wildren . 32 = Batance - Service_charge;
                                Account account :
 Class Sav Acet extends Account of
private Static final double Intersect-Rate = 0.05;
 Il June public Sav Acet (String customer Name, double Balance) ¿
    Super ( customer Name, account Number, "Savings",);
                                            7 9819
  System out phintle ("Invalid");
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double interest = balance * interest-rate ;
                    System. out. println ("Interest computed");
                public void withdraw () {
            case our estatic time double Minum Colon is 1000 0:
                             balance -= amount;
                               S. ystem ( "Withdraw success ful").
   public void ouncent Acet ( Streit sesstamentiame, Bouble baisma)
   (23 roled, "tourns" sodowid tours System out printly ("Insufficient Balance").
              public void updatiBalance 62 of how sides
                  ? ( ) = < compound Interest () ;
public Class Bank & two waters
             public Static void main ( String [7 args) {
                    Scanner sc = new Scanner ( 3ystem. in ) ;
("sender turbifferet ") System out: printin ( * Customer Name: ");
                    String name = sc. next line ();
        3 ( senson System out. priatin ( "Account number: ");
       string acc Num = sc. nextline ();
                   Account account ;
  if Ctype equals Ignore Case ("Savings") }
                                account = new Sav Acct (name, acc Num);
spisus?" regiment sessons and metans printe ) too how? ("current")) {
                               account = new CurrAcct ();
                   else {
                             System. out. println ("Invalid");
```

Bool

```
Boolean quit = False ;
          (! quit) {
    while
                                                     Output =
             System. printlu (" 11. Deposit In
                               2. Withdraw in 3. Display Balance in
                                4. update Balance in
                            Enter Inflict Policy ( Jun 1. 3000
           2. Deposit & withdraw & Capital Balance.
                   case 1: System. out. println ("Enter Amount:");
                            double deposit Amound = SC. next Double ()
         0.0310101 : 00 M.D. account. deposit (deposit Amount);
                             break ;
           20 mal & case 2: System out printin ( "Withdraw Amt");
                          double duithdraw Amt = sc. next Double ();
                             account. withdraw ( withdraw Amt);
                              Enter your curice ; short
        6.0030001: sanslod
                              account display Balance ();
                              break ;
                    case 4: account updateBalance ();
                                break isologian . 8
                               quit = trine to by
                     case 5:
                                break; two .3
                                      Euter Choice: 5
System. out. printhe "Thank You" LOV ANDAT
```

Account Number: 12234 Account Type: Savings Enter Initial Balance: 100000

1. Deposit 2. withdraw 3. Display Balance

: (" : Sowon't . Update Balance . 5. Quit.

Futu Amount to deposit . 10100 Deposit sucessful. New Balance: 1010100.0.

Osland. Deposit 2. Withdrows 3. Display Balance (And 4. Update Balance 5. Quit.

Enter your choice : 14

Interest computed. New balance: 1060500.0.

break 5

1. Deposit

2. Withdraw . Door : 12 1200

3. Display Balance

4. Update Balance up 3 3 3000

Quit & shoord

Euter Choice: 5

Thank You for Banking with sus to water

busts Package CIE which has two classes - Russmas as Enter Name: Shreyas and seedman and se morrog and sur Entre Name: Streyas

Account Number: 1354 person no son shouth sends suff

Account Type: Current

Account Type: Current

Account Type: 2000 out 1. toucht 12 sends of stress

Tutial Balance: 2000 out 1. toucht 12 sends of stress Account The Balance: 2000 0 The Balance to the Bala 1. Deposit 2. Withdraw 3. Display Balance 4. Update Balance somestore of the student Entu choice: 1 Enter Amount to deposit: 10000 (*) Student Java Deposited Successfully. New Balance: 30,000. 0 import java util . Scanner : Enter choice: 4 public class studient E Interest updated and Adde Otto batastong Entre choice: 3 : man printe to estatore photested with sems Balance is: 30125.0

Balance is: 30125.0

Entre Choice 5

Entr eystern out print ("Ensit Jane T); ver = se. nextline (); System. out. paint ("Entre Marning! System. out. privit ("Enter Semester); sem = sc. nextInt(); public void display Detaile (1 f System. out. privater (" ven : " + ven) : system out printer (" Name:"+ manu); System. out pranthe ("Semester:"+ sem);