## LAB PROGRAMME-5

Develop a jova programme to create a ches Bank that maintains two kinds of account for it's customers one called savings account and other current account. The saving account provides compand Interest and withdrawl but not cheque book facility, the worlent account provides cheque book facility but no interest Correct account holders also maintain Minimum balance if balance falls below this level a Service is imposed in import java util Scanner; class Account & protected string custName; protected int acc No; protected String acc Type; Protected double balance; public Account (String customer Name, int accNo, string account Type, double balance) & this, customer Name = customer Name; this, account Number = account Number; this account Type = account type;

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	break;
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## Lab programme 5

```
import java.util.Scanner;
class Account {
    protected String customerName;
    protected int accountNumber;
    protected String accountType;
    protected double balance;
    public Account(String customerName, int 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);
    }
}
class SavAcct extends Account {
    private static final double INTEREST_RATE = 0.07;
    public SavAcct(String customerName, int accountNumber, double balance) {
        super(customerName, accountNumber, "Savings", balance);
   }
    public void computeAndDepositInterest() {
        double interest = balance * INTEREST_RATE;
        balance += interest;
        System.out.println("Interest of " + interest +
        " has been added. New balance: " + balance);
   }
    public void withdraw(double amount) {
        if (amount > 0 && amount <= balance) {</pre>
            balance -= amount;
```

```
System.out.println("Withdrawal successful. New balance: $" + balance);
        } else {
            System.out.println("Invalid withdrawal amount or insufficient balance.");
        }
   }
}
class CurAcct extends Account {
    private static final double MIN_BALANCE = 500.0;
    private static final double SERVICE_CHARGE = 50.0;
    public CurAcct(String customerName, int accountNumber, double balance) {
        super(customerName, accountNumber, "Current", balance);
    }
    public void withdraw(double amount) {
        if (amount > 0 && amount <= balance) {</pre>
            balance -= amount;
            System.out.println("Withdrawal successful. New balance: " + balance);
            checkMinimumBalance();
            System.out.println("Invalid withdrawal amount or insufficient balance.");
        }
   }
    private void checkMinimumBalance() {
        if (balance < MIN_BALANCE) {</pre>
            balance -= SERVICE_CHARGE;
            System.out.println("Balance fell below minimum. Service charge of "
            + SERVICE_CHARGE + " applied. New balance: " + balance);
       }
    }
}
public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter customer name: ");
        String customerName = scanner.nextLine();
        System.out.print("Enter account number: ");
        int accountNumber = scanner.nextInt();
        System.out.print("Enter initial balance: ");
        double initialBalance = scanner.nextDouble();
        System.out.println("Choose account type:");
        System.out.println("1. Savings Account");
        System.out.println("2. Current Account");
        int accountChoice = scanner.nextInt();
```

```
Account account;
if (accountChoice == 1) {
    account = new SavAcct(customerName, accountNumber, initialBalance);
} else if (accountChoice == 2) {
    account = new CurAcct(customerName, accountNumber, initialBalance);
} else {
    System.out.println("Invalid account type selection.");
    scanner.close();
    return;
}
boolean exit = false;
while (!exit) {
    System.out.println("\nChoose an operation:");
    System.out.println("1. Deposit");
    System.out.println("2. Withdraw");
    System.out.println("3. Display Balance");
    if (account instanceof SavAcct) {
        System.out.println("4. Compute and Deposit Interest ");
    System.out.println("5. Exit");
    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();
            if (account instanceof SavAcct) {
                ((SavAcct) account).withdraw(withdrawAmount);
            } else if (account instanceof CurAcct) {
                ((CurAcct) account).withdraw(withdrawAmount);
            }
            break;
        case 3:
            account.displayBalance();
            break;
        case 4:
            if (account instanceof SavAcct) {
                ((SavAcct) account).computeAndDepositInterest();
            } else {
                System.out.println("Invalid choice for Current Account.");
            }
```

```
break;

case 5:
    exit = true;
    System.out.println("Exiting...");
    break;

default:
    System.out.println("Invalid choice.");
}

scanner.close();
}
```

## OUTPUT

Enter customer name:xyz Enter account number: 1001 Enter initial balance: 1000 Choose account type:

- 1. Savings Account
- 2. Current Account 1

Choose an operation:

- 1. Deposit
- 2. Withdraw
- 3. Display Balance
- 4. Compute and Deposit Interest
- 5. Exit 1

Enter amount to deposit: 200

Deposit successful. New balance: 1200.0

Choose an operation:

- 1. Deposit
- 2. Withdraw
- 3. Display Balance
- 4. Compute and Deposit Interest
- 5. Exit

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Interest of 48.0 has been added. New balance: 1248.0

Choose an operation:

- 1. Deposit
- 2. Withdraw

- 3. Display Balance
- 4. Compute and Deposit Interest
- 5. Exit

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Exiting...