09/01/24 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.

```
import java.util.Scanner;

class Account {
    String customerName;
    int accnumber;
    string acctype;
    double balance;

Account (string name; int accno,
    string actype) {
customerName = name;
accnumber = accno;
acctype = actype;
balance = 0;
}
void deposit(double amount) {
    balance += amount;
```

```
System.out.println("Deposit of Rs"+
amount+" successful. New balance: Rs"+
balance);
}
void display(){
System.out.println("Account balance for
"+customerName+": Rs"+balance);
}
}
class CurrAcct extends Account{
  double minbal;
  double serchar;

CurrAcct(String name, int accno, double
  minbal){
  super(name, accno, "current");
  minimumBalance = minbal;
  serchar = 10.0;
}
void checkminbal(){
 if(balance < minbal){
    balance -= serchar;
System.out.println("Service charge of Rs"+
serchar+" applied. New balance: Rs"+
balance);
}
}
void withdraw(double amount){
 if(amount <= balance){
 balance -= amount;
System.out.println("Withdrawal of
  Rs"+amount+" successful. New
```

```
balance : Rs" + balance);
}
else {
System.out.println("Insufficient funds. Withdrawal failed");
}
}
}
class SavAcct extends Account {
double interestRate;
SavAcct(String name, int accno, double interestRate) {
super(name, accno, "Savings");
this.interestRate = interestRate;
}
void computeInterest() {
double interest = balance * (interestRate/100);
balance += interest;
System.out.println("Interest of Rs" + interest + "applied. New balance : Rs" + balance);
}

void withdraw(double amount) {
if (amount <= balance) {
balance -= amount;
System.out.println("Withdrawal of Rs" + amount + "successful. New balance : Rs" + balance);
}
else
{
```

```
System.out.println ( " Insufficient funds.
  Withdrawal failed");
 }
}
}
public class Bank {
public static void main (String [] args)
{
Scanner scanner = new Scanner (System.in);
System.out.println ("Enter your name :");
String customerName = scanner.nextLine();
System.out.print ("Enter your account
number: ");
int accountNumber = scanner.nextInt();
CurrAcct currentAccount = new CurrAcct
( customer.name, accno, 1000.0 );
SavACct savingsAccount = new SavACct
savingsAccount = new savAcc (customer
Name, accno, 5.0);

int choice;
do {
System.out.println ("\nMenu:\n1. Deposit
\n2. Withdraw \n3. Compute interest for
savings account \n4. Display Account
details \n5. Exit");
System.out.println ("Enter your choice");
choice = scanner.nextInt ();

switch (choice) {
case 1: System.out.print ("Enter deppsit
  : Rs");
```

```
double depositAmount = scanner.nextDouble();
currentAccount.deposit(depositAmount);
break;

case 2: System.out.print("Enter withdrawal amount: Rs");
double withdrawalAmount = scanner.nextDouble();
currentAccount.withdraw(withdrawAmount);
break;
case 3: savingsAccount.computeInterest();
break;
case 4: currentAccount.displayBalance();
break;
case 5: System.out.println("Exiting program");
break;
default: System.out.println("Invalid choice");
}
} while (choice != 5);
}
}
```

Output:

```
Enter customer name: Rahul
Enter account number: 78
Enter customer name: Rohan
Enter account number: 18

--MENU--
1. Deposit
```

2. Withdraw
3. Compute interest for SavingsAccount
4. Display account details
5. Exit

Enter your choice : 1
Enter the type of account : saving
Enter the deposit amount : 1000

--Menu--

1. Deposit
2. Withdraw
3. Compute interest for savingsAccount
4. Display accountdetails
5. Exit

Enter your choice = 2
Enter the withdrawal amount : 200

--menu--

1. Deposit
2. Withdraw
3. Compute interest for SavingsAccount
4. Display accountdetails
5. Exit

Enter your choice = 4
Customer name : Rahul
Account number = 78
Type of account = saving
Balance = 800.0

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