DATE: 10-02-2023 **EXPERIMENT NO** 4 **REGISTER NO**: 2162014

IMPLEMENTATION OF INHERITENCE

AIM:

Create an interface called “Bank” and declare a method to get customer details: customer name, customer id , number of years, and customer balance. Three classes: Axes, ICIC, and SBI, should be derived from Bank. The customer details and interest rate should be overridden in the third class. The interest rate for Axes is 5%, ICIC is 7%, and SBI is 8%.
Display the Menu:
1. AXES
2. ICIC
3. SBI
According to the selection, the total amount after a number of years should be calculated for the given balance_amount, and all the details should be displayed as follows:

CUSTOMER NAME	ID	NO OF YEARS	BALANCE	BANK	RATE OF INTEREST	TOTAL AMOUNT
AAAA	111	5	5000	AXIS	5%	5500

PROGRAM:

```
/**
 *
 * @author 2162014
 */
import java.util.Scanner;

interface Bank {

   void get_details();
}

class Axes implements Bank {

   String Cname;
   int Cid, nay;
   double balance, tbalance, roi;
   String ROI;

   @Override
   public void get_details() {
      Scanner sc = new Scanner(System.in);
      System.out.println("ENTER CUSTOMER NAME: ");
      Cname = sc.nextLine();
      System.out.println("ENTER CID: ");
      Cid = sc.nextInt();
      System.out.println("ENTER NUMBER OF YEARS: ");
      nay = sc.nextInt();
      System.out.println("ENTER CURRENT BALANCE: ");
      balance = sc.nextDouble();
      roi = 5;
```

```
        ROI = "5%";
        tbalance = balance + ((roi * balance * nay) / 100);
    }

    void show_details() {
        System.out.println("CUSTOMER NAME \t\t ID \t\t NO. OF YEARS \t\t BALANCE \t\t
BANK \t\t RATE OF INTEREST \t\t TOTAL AMOUNT");
        System.out.println(Cname + "\t\t\t" + Cid + "\t\t\t" + nay + "\t\t\t" + balance + "\t\t\t" +
"AXES" + "\t\t\t" + ROI + "\t\t\t" + tbalance);
    }
}

class SBI implements Bank {

    String Cname;
    int Cid, nay;
    double balance, tbalance, roi;
    String ROI;

    @Override
    public void get_details() {
        Scanner sc = new Scanner(System.in);
        System.out.println("ENTER CUSTOMER NAME: ");
        Cname = sc.nextLine();
        System.out.println("ENTER CID: ");
        Cid = sc.nextInt();
        System.out.println("ENTER NUMBER OF YEARS: ");
        nay = sc.nextInt();
        System.out.println("ENTER CURRENT BALANCE: ");
        balance = sc.nextDouble();
        roi = 8;
        ROI = "8%";
        tbalance = balance + ((roi * balance * nay) / 100);
    }

    void show_details() {
        System.out.println("CUSTOMER NAME \t\t ID \t\t NO. OF YEARS \t\t BALANCE \t\t
BANK \t\t RATE OF INTEREST \t\t TOTAL AMOUNT");
        System.out.println(Cname + "\t\t\t" + Cid + "\t\t\t" + nay + "\t\t\t" + balance + "\t\t\t" +
"SBI" + "\t\t\t" + ROI + "\t\t\t" + tbalance);
    }
}

class ICIC implements Bank {
```

```
    String Cname;
    int Cid, nay;
    double balance, tbalance, roi;
    String ROI;

    @Override
    public void get_details() {
        Scanner sc = new Scanner(System.in);
        System.out.println("ENTER CUSTOMER NAME: ");
        Cname = sc.nextLine();
        System.out.println("ENTER CID: ");
        Cid = sc.nextInt();
        System.out.println("ENTER NUMBER OF YEARS: ");
        nay = sc.nextInt();
        System.out.println("ENTER CURRENT BALANCE: ");
        balance = sc.nextDouble();
        roi = 7;
        ROI = "7%";
        tbalance = balance + ((roi * balance * nay) / 100);
    }

    void show_details() {
        System.out.println("CUSTOMER NAME \t\t ID \t\t NO. OF YEARS \t\t BALANCE \t\t
BANK \t\t RATE OF INTEREST \t\t TOTAL AMOUNT");
        System.out.println(Cname + "\t\t\t" + Cid + "\t\t\t" + nay + "\t\t\t" + balance + "\t\t\t" +
"ICIC" + "\t\t\t" + ROI + "\t\t\t" + tbalance);
    }
}

public class interBank {

    public static void main(String[] args) {
        int ch;
        Scanner sc = new Scanner(System.in);
        System.out.println("1. AXES");
        System.out.println("2. ICIC");
        System.out.println("3. SBI");
        ch = sc.nextInt();
        switch (ch) {
            case 1 -> {
                Axes a = new Axes();
                a.get_details();
                a.show_details();
            }
            case 2 -> {
```

```
            ICIC i = new ICIC();
            i.get_details();
            i.show_details();
        }
        case 3 -> {
            SBI s = new SBI();
            s.get_details();
            s.show_details();
        }
        default -> System.out.println("Invalid choice!");
      }
   }
}
```

OUTPUTS:

```
C:\Users\2162014\OOP\exp3\src\main\java>java interBank
1. AXES
2. ICIC
3. SBI
1
ENTER CUSTOMER NAME:
ASHVATH
ENTER CID:
454
ENTER NUMBER OF YEARS:
5
ENTER CURRENT BALANCE:
600
CUSTOMER NAME            ID             NO. OF YEARS           BALANCE               BANK           RATE OF INTEREST              TOTAL AMOUNT
ASHVATH                 454                    5                   600.0               AXES                     5%                     750.0

C:\Users\2162014\OOP\exp3\src\main\java>java interBank
1. AXES
2. ICIC
3. SBI
2
ENTER CUSTOMER NAME:
BARATH
ENTER CID:
655
ENTER NUMBER OF YEARS:
4
ENTER CURRENT BALANCE:
5000
CUSTOMER NAME            ID             NO. OF YEARS           BALANCE               BANK           RATE OF INTEREST              TOTAL AMOUNT
BARATH                  655                    4                  5000.0               ICIC                     7%                    6400.0
```

```
C:\Users\2162014\OOP\exp3\src\main\java>java interBank
1. AXES
2. ICIC
3. SBI
3
ENTER CUSTOMER NAME:
ASHVATH
ENTER CID:
665
ENTER NUMBER OF YEARS:
9
ENTER CURRENT BALANCE:
2100
CUSTOMER NAME            ID             NO. OF YEARS           BALANCE               BANK           RATE OF INTEREST              TOTAL AMOUNT
ASHVATH                 665                    9                  2100.0               SBI                      8%                    3612.0
```

RESULTS:

The java program was successfully created to implement the concept of Inheritance.