

## Assignment 2:

1. Create an Interest calculator for banks using java which incorporates, Inheritance, polymorphism, classes, object etc.
2. User can first select a bank.
3. After selecting bank user can select a type of loans like, personal loan, housing loan, educational loan, gold loan.
4. User should be able to enter amount of loan they need. (If gold how many grams)
5. System should be able to present the interest rate along with period of repayment

### Program:

```
import java.util.Scanner;

class interestcalculator
{
    void interestcalculator(double R)
    {
        double Amount,SI,T;

        System.out.println("Enter Principle Amount:");

        Scanner input = new Scanner(System.in);

        Amount= input.nextDouble();

        System.out.println("Enter the duration of repayment (in Months):");

        T = input.nextDouble();

        SI = (Amount * R * T) / 1200;

        System.out.println("\nSimple Interest is:" + SI+ " \nThe rate of interest:"+R+"% \nThe period of "+T+" months");
    }
}
```

```

}

class IOB extends interestcalculator
{
    interestcalculator i = new interestcalculator();

    public void personal()
    {
        System.out.println("Selected as Personal loan");
        i.interestcalculator(11.9);
    }

    public void educational()
    {
        System.out.println("Selected as Educational loan");
        i.interestcalculator(8.2);
    }

    public void home()
    {
        System.out.println("Selected as Home loan");
        i.interestcalculator(7.2);
    }
}

class SBI extends IOB
{
    interestcalculator i = new interestcalculator();

    public void personal()
    {
        IOB h = new IOB();
        h.personal();
    }
}

```

```

public void educational()
{
    System.out.println("Selected as Educational loan");
    i.interestcalculator(10.8);
}

public void home()
{
    System.out.println("Selected as Home loan");
    i.interestcalculator(7);
}

public void vehicle( double R)
{
    System.out.println("Selected as Vehicle loan");
    i.interestcalculator(8.5);
}
}

class AXIS extends SBI
{
    interestcalculator i = new interestcalculator();
    SBI f = new SBI();
    public void educational()
    {
        System.out.println("Selected as Educational loan");
        i.interestcalculator(11);
    }

    public void home()
    {
        f.home();
    }
}

```

```

public void vehicle()
{
    f.vehicle(12.7);
}

public void business()
{
    System.out.println("Selected as Business loan");
    i.interestcalculator(14);
}
}

class HDFC extends interestcalculator
{
    interestcalculator i = new interestcalculator();

    public void personal()
    {
        System.out.println("Selected as Personal loan");
        i.interestcalculator(14.6);
    }

    public void gold()
    {
        int gold;

        System.out.println("Selected as Gold loan \t Enter the gold (in grams):");

        Scanner input = new Scanner(System.in);

        gold = input.nextInt();

        i.interestcalculator(5.7);
    }
}

public class main
{
    public static void main(String[] args)

```

```

{
    int bank,bl;

    System.out.println("Welcome!!!\nInterest Calculator");

    System.out.println("The available banks are \n 1.IOB Bank \n 2.SBI Bank \n 3.AXIS Bank \n
4.HDFC Bank");

    System.out.println("Select the bank by choosing number:");

    Scanner input = new Scanner(System.in);

    bank = input.nextInt();

    switch (bank)
    {
        case 1:

            IOB i = new IOB();

            System.out.println("Selected as IOB Bank");

            System.out.println("\nTypes of Loans available in the IOB bank are \n1.Personal Loan
\n2.Educational Loan \n3.Home loan");

            System.out.println("Select the loan by choosing number:");

            bl = input.nextInt();

            switch (bl)
            {
                case 1:

                    i.personal();

                    break;

                case 2:

                    i.educational();

                    break;

                case 3:

                    i.home();

                    break;

                default:

```

```

        System.out.println("RESELECT THE OPTION");
    }
    break;
case 2:
    SBI s = new SBI();
    System.out.println("Selected as SBI Bank");
    System.out.println("\nTypes of Loans available in the SBI bank is \n1.Personal Loan
\n2.Educational Loan \n3.Home loan\n4.Vehicle loan ");
    System.out.println("Select the loan by choosing number:");
    bl = input.nextInt();
    switch (bl)
    {
        case 1:
            s.personal();
            break;
        case 2:
            s.educational();
            break;
        case 3:
            s.home();
            break;
        case 4:
            s.vehicle( 12);
            break;
        default:
            System.out.println("RESELECT THE OPTION");
    }
    break;
case 3:

```

```

    AXIS a = new AXIS();

    System.out.println("Selected as AXIS Bank");

    System.out.println("\nTypes of Loans available in the AXIS bank are \n 1.Personal Loan \n
2.Educational Loan \n 3.Home loan " + "\n 4.Vehicle loan \n 5.Business loan ");

    System.out.println("Select the loan by choosing number:");

    bl = input.nextInt();

    switch (bl)
    {
        case 1:

            System.out.println("Selected as Personal loan");

            a.personal();

            break;

        case 2:

            System.out.println("Selected as Educational loan");

            a.educational();

            break;

        case 3:

            System.out.println("Selected as Home loan");

            a.home();

            break;

        case 4:

            System.out.println("Selected as Vehicle loan");

            a.vehicle() ;

            break;

        default:

            System.out.println("RESELECT THE OPTION");

    }

    break;

case 4:

```

```

HDFC h= new HDFC();

System.out.println("Selected as HDFC Bank");

System.out.println("\nLoans available in the HDFC bank are, \n 1.Personal Loan \n 2.Gold
Loan ");

System.out.println("Kindly select the loan by choosing corresponding number:");

bl = input.nextInt();

switch (bl)
{
    case 1:
        System.out.println("Selected as Personal loan");
        h.personal();
        break;
    case 2:
        System.out.println("Selected as gold loan");
        h.gold();
        break;
    default:
        System.out.println("RESELECT THE OPTION");
}

break;

default:

    System.out.println("RESELECT THE OPTION");

}

}

}

```

**output:**



```
Result
compiled and executed in 20.841 sec(s)

Welcome!!!
Interest Calculator
The available banks are
1.IOB Bank
2.SBI Bank
3.AXIS Bank
4.HDFC Bank
Select the bank by choosing number:
1
Selected as IOB Bank

Types of Loans available in the IOB bank are
1.Personal Loan
2.Educational Loan
3.Home loan
Select the loan by choosing number:
2
Selected as Educational loan
Enter Principle Amount:
100000
Enter the duration of repayment (in Months):
12

Simple Interest is:8199.999999999998
The rate of interest:8.2%
The period of 12.0 months
|
```