EXP NO :2

DATE:11.07.19

CURRENCY CONVERTER, DISTANCE CONVERTER,TIME CONVERTER USING PACKAGE

AIM

To Develop a Java Console Application to Implement Currency, Distance and Time Conversion using Package

REQUIREMENT

* To create java application to implement currency converter (dollar to INR, Euro to INR, Yen to INR and vice versa) time converter (hrs to minutes, sec and vice versa) using package distance converter (Meter to KM, Miles to KM and vice versa)

* Create a package library

* Create a class currency converter and define method for dollar to INR, Euro to INR, Yen to INR and vice versa

* Create class time converter and define method for hrs to minutes, sec and vice versa

* Create class distance converter and define method for Meter to KM, Miles to KM and vice versa

* Create a class calculation 1 use the conversion function and display the results

ALGORITHM

Step:1 Create a Package Containing Converter app

Step:2 It must contain the Following Class Calculation 1, conversion library (currency, distance, time converter)

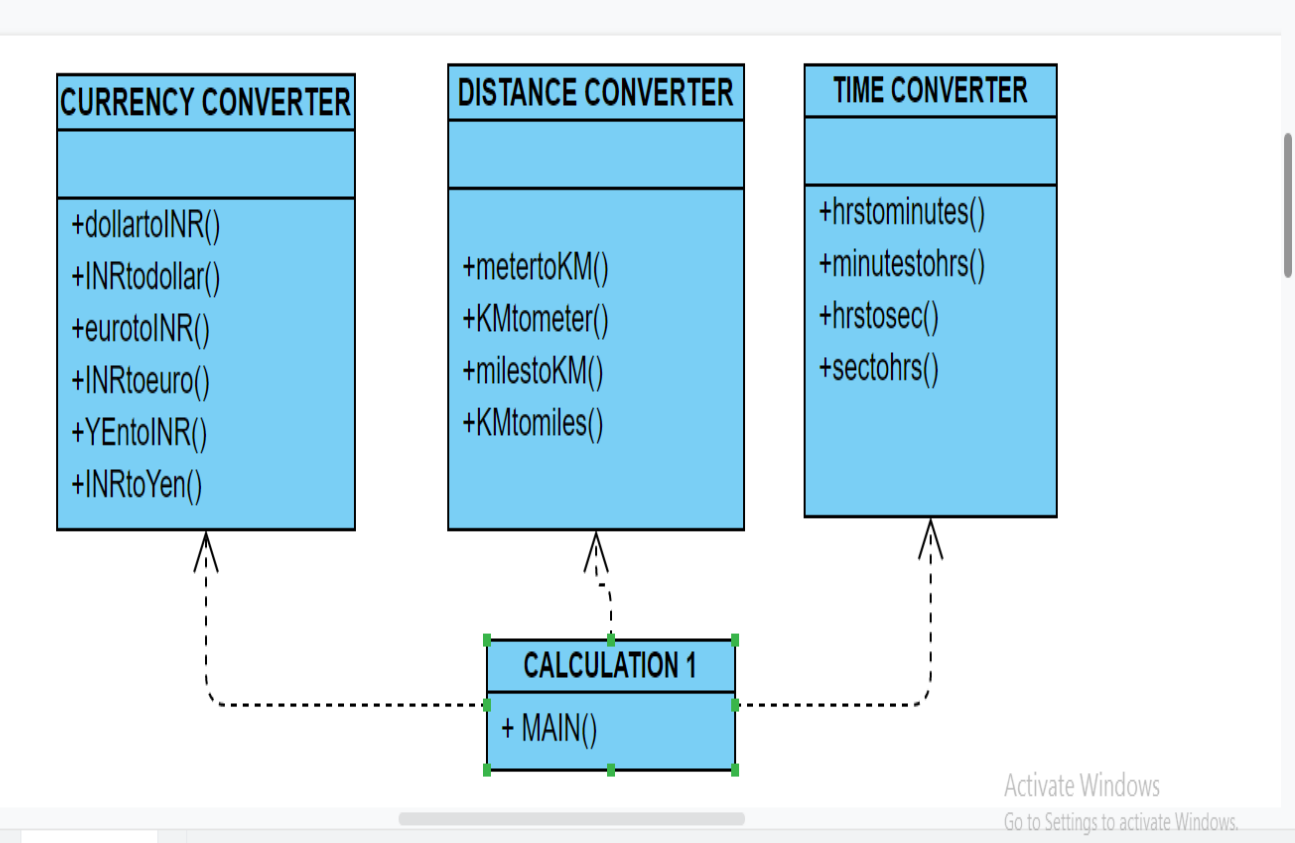
Step:3 Under The Class Currency Converter write suitable Java Code to Convert Dollar to INR, Euro to INR, Yen to INR

Step:4 Under The Class Distance Converter write suitable Java Code to Meter to KM, Miles to KM

Step: 5 Under The Class time Converter write suitable Java Code to hrs to minutes, sec

Step: 6 Under Calculation 1 Create Three New Variable and Get the Data from the required conversion type, process them and print the result

CLASS DIGRAM



program

calculation .java

```
/***calculation
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package convertorapp;
```

```
import java.util.Scanner;
I import convertorlibrary.*;
public class Calculation1 {
public static void main(String[]args) {
        double a,b;
        int option;
        Scanner sc=new Scanner(System.in);
        while(true)
        {
                System.out.println("1.dollarTOINR");
                System.out.println("2.INRTOdollar");
                System.out.println("3.euroTOINR");
                System.out.println("4.INRTOeuro");
                System.out.println("5.yenTOINR");
                System.out.println("6.INRTOyen");
                System.out.println("7.metertokm");
                System.out.println("8.kmtometer");
                System.out.println("9.milestokm");
                System.out.println("10.kmtomiles");
                System.out.println("11.hrstomins");
                System.out.println("12.minstohrs");
                System.out.println("13.hrstosec");
                System.out.println("14.sectohrs");
                System.out.println("15.Exit");
                System.out.println("Enter your choice:");
                option=sc.nextInt();
```

```
                switch (option)

{
                case 1:
                        System.out.print("enter dollar");
                        a=sc.nextDouble();
                        b=CurrencyConvertor.dollarTOINR(a);
                        System.out.printf("%.2f dollar=%.2f Rupees\n",a,b);
                        break
                case 2:
                        System.out.print("INR");
                        a=sc.nextDouble();
                        b=CurrencyConvertor.INRTOdollar(a);
                        System.out.printf("%2f Rupees=%2f$\n",a,b);
                        break;
                case 3:
                        System.out.print("euro");
                        a=sc.nextDouble();
                        b=CurrencyConvertor.euroTOINR(a);
                        System.out.printf("%.2f euro=%.2f Rupees\n",a,b);
                        break;
                case 4:
                        System.out.print("INR");
                        a=sc.nextDouble();
                        b=CurrencyConvertor.INRTOeuro(a);
                        System.out.printf("%.2f Rupees=%.2f euro\n",a,b);
```

```
                break;
            case 5:
                System.out.print("yen");
                a=sc.nextDouble();
                b=CurrencyConvertor.yenTOINR(a);
                System.out.printf("%.2f yen=%.2f Rupees\n",a,b);
                break;
            case 6:
                System.out.print("INR");
                a=sc.nextDouble();
                b=CurrencyConvertor.INRTOyen(a);
                System.out.printf("%.2f Rupees=%.2f yen\n",a,b);
                break;
            case 7:
                System.out.print("meter");
                a=sc.nextDouble();
                b=DistanceConvertor.metertokm(a);
                System.out.printf("%.2f meter=%.2f km\n",a,b);
                break;
            case 8:
                System.out.print("km");
                a=sc.nextDouble();
                b=DistanceConvertor.kmtometer(a);
                System.out.printf("%.2f km=%.2f meter\n",a,b);
                break;
```

```
case 9:
                System.out.print("miles");
                a=sc.nextDouble();
                b=DistanceConvertor.milestokm(a);
                System.out.printf("%.2f miles=%.2f km\n",a,b);
                break;
case 10:
                System.out.print("km");
                a=sc.nextDouble();
                b=DistanceConvertor.kmtomiles(a);
                System.out.printf("%.2f km=%.2f miles\n",a,b);
                break;
case 11:
                System.out.print("hrs");
                a=sc.nextDouble();
                b=TimeConvertor.hrstomins(a);
                System.out.printf("%.2f hrs=%.2f mins\n",a,b);
                break;
 case 12:
                 System.out.print("mins");
                 a=sc.nextDouble();
                b=TimeConvertor.minstohrs(a);
                System.out.printf("%.2f mins=%.2f hrs\n",a,b);
                        break;
```

```
case 13:
                System.out.print("hrs");
                a=sc.nextDouble();
                b=TimeConvertor.hrstosec(a);
                System.out.printf("%.2f hrs=%.2f sec\n",a,b);
                break;
case 14:
                System.out.print("sec");
                a=sc.nextDouble();
                b=TimeConvertor.sectohrs(a);
                System.out.printf("%.2f sec=%.2f hrs\n",a,b);
                break;
 case 15:
                break;
                default:
                System.out.println("please enter a vaild number");
                }
                  if(option==15)
                                break;
                        }
                        }
```

currency converter .java

```
package convertorlibrary;
public class CurrencyConvertor {
```

```
public static double dollarTOINR(double dollar){
double INR;
INR=68.52*dollar;
return INR;
}

public static double INRTOdollar(double INR)
{
        double dollar;
        dollar=(INR/68.52)+(INR%68.52);
        return dollar;

}
public static double euroTOINR(double euro)
{
        double INR;
        INR=77.23*euro;
        return INR;
}
public static double INRTOeuro(double INR)
        {  double euro;
        euro=(INR/77.23)+(INR*77.23);
        return euro;
        }
public static double yenTOINR(double yen)
{  double INR;
```

```
  INR=0.63*yen;
    return INR;
    }
public static double INRTOyen(double INR)
{ double yen;
yen=(INR/0.63)+(INR*0.63);
return yen;
}
```

distance converter.java

```
package convertorlibrary;
public static double metertokm(double meter)
{double km;
km=(meter/1000)+(meter%1000);
return km;
}
public static double kmtometer(double km)
{double meter;
meter=km*1000;
return meter;
}
public static double milestokm(double miles)
{double km;
km=(1.609*miles);
return km;
}
```

```
public static double kmtomiles(double km)
{double miles;
miles=(km/1.609)+(km/1.609);
return miles;
}double kmtomiles(double km)
}
```

time converter.java

```
package convertorlibrary;


public class TimeConvertor {
 public static double hrstomins(double hrs )
 {double mins;
  mins=60*hrs;
  return mins;
 }
 public static double minstohrs(double mins)
 {double hrs;
 hrs=(mins/60)+(mins%60);
 return hrs;
 }
 public static double hrstosec(double hrs )
 {double sec;
 sec=3600*hrs;
 return sec;
}
```

```
public static double sectohrs(double sec)
{double hrs;
hrs=(sec/3600)+(sec%3600);
return hrs;
}
}
```

output:

1.DollarTOINR

2.INRTODollar

3.EuroTOINR

4.INRTOEuro

5.YenTOINR

6.INRTOYen

7.metertokm

8.kmtometer

9.milestokm

10.kmtomiles

11.hrstomin

12.mintohrs

13.hrstosec

14.sectohrs

15.Exit!

Enter Your Choice:3

Enter Euro:50

50.00 euro=3858.00

Result

Thus the java console application for currency,distance and time converter is output is verified with output