EXP.NO-2	CURRENCY CONVERTER
DATE-11-07-19	

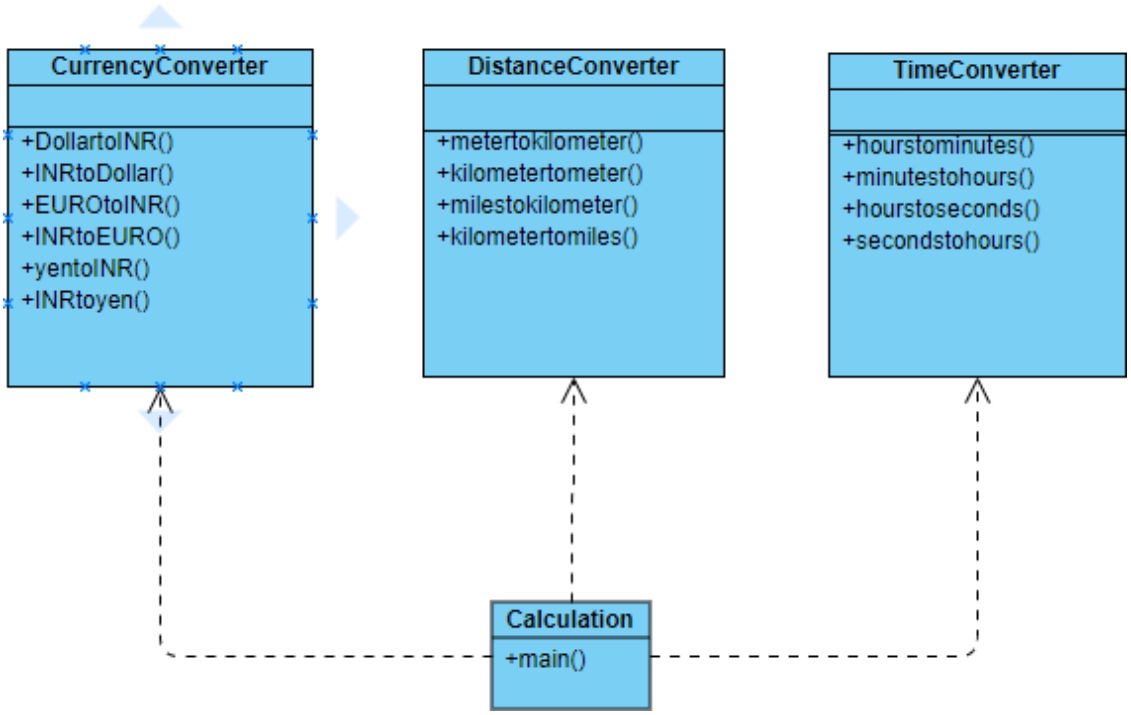
AIM:To develop a java console application for the currency converter,distance converter and time converter.

REQUIREMENT:Develop a java application to create a package converter library and converter app and to create the classes as currency converter,distance converter and time converter with the member functions as dollar to INR,EURO to INR and yen to INR and viceversa from the class currency converter.also with member functions as meter to kilometer and miles to kilometer and viceversa conversions from the class distance converter.similarly hours to minutes and hours to seconds and viceversa as data members from the class time converter.

ALGORITHM:

1. Declare the packages as coverter library and converter app.
2. Declare the class names as currency converter,distance converter and time converter.
3. Declare all the member functions.
4. Create the package as converter app and import all the conversion calculation from the converter library package.
5. Get the input from the user.
6. Calculate the corresponding conversion.
7. Display the result.

CLASS DIAGRAM:



PROGRAM:

```
/****
 * Program for currency conversion
 * @author THARUN
 *  tharun50@gmail.com
 */
package converterlibrary;
public class CurrencyConverter {
        public static double dollartoINR(double dollar)
        {
                double INR;
                        INR=dollar*68.56;
                return INR;
        }

        public static double INRtodollar(double INR)
        {
```

```
        double dollar;
                dollar=INR/68.56;
        return dollar;
}
public static double EUROtoINR(double EURO)
{
        double INR;
               INR=EURO*77.39;
        return INR;
}

public static double INRtoEURO(double INR)
{
        double EURO;
               EURO=INR/77.39;
        return EURO;
}
public static double yentoINR(double yen)
{
        double INR;
                INR=yen/0.64;
        return INR;
}

public static double INRtoyen(double INR)
{
        double yen;
                yen=INR*0.64;
        return yen;
}
```

```
}


/****
 * Program for distance conversion
 * @author tharun
 *  Tharun50@gmail.com
 */
package converterlibrary;
public class DistanceConverter {
        public static double metertokilometer(double  meter)
        {
                double kilometer;
                        kilometer=meter*1000;
                return kilometer;
        }

        public static double kilometertometer(double kilometer)
        {
                double  meter;
                        meter=kilometer/1000;
                return  meter;
        }
        public static double milestokilometer(double miles)
        {
                double kilometer;
                      kilometer=miles/1.609;
                return kilometer;
        }
        public static double kilometertomiles(double kilometer)
        {
```

```
                double miles;
                        miles=kilometer*1.609;
                 return miles;
        }
}


/****
 * Program for time conversion
 * @author tharun
 *  Tharun50@gmail.com
 */
package converterlibrary;
public class TimeConverter {
        public static double hourstominutes(double hours)
        {
                double minutes;
                        minutes=hours*60;
                return minutes;
        }

        public static double minutestohours(double minutes)
        {
                double hours;
                        hours=minutes/60;
                return hours;
        }
        public static double hourstoseconds(double hours)
        {
                double seconds;
                        seconds=hours*3600;
```

```
            return seconds;
        }

        public static double secondstohours(double seconds)
        {
            double hours;
                hours=seconds/3600;
            return hours;
        }
}
```

CALCULATION :

```
/**

 * Application for currency distance and time conversion
 *
 * developed by
 * tharun50@gmail.com
 *
 *
 */
package converterapp;

import java.util.Scanner;
import converterlibrary.*;

public class Calculation {

        public static void main(String[] args) {
            double value1,value2;
```

```
int option;
Scanner sc=new Scanner(System.in);

while(true)
{
        System.out.println("1.    dollar to INR conversion");
        System.out.println("2.    INR to dollar conversion");
        System.out.println("3.    EURO to INR conversion");
        System.out.println("4.    INR to EURO conversion");
        System.out.println("5.    yen to INR");
        System.out.println("6.    INR to yen");
        System.out.println("7.    meter to kilometer");
        System.out.println("8.    kilometer to meter");
        System.out.println("9.    miles to kilometer");
        System.out.println("10. kilometer to miles");
        System.out.println("11. hours to minutes");
        System.out.println("12. minutes to hours");
        System.out.println("13. hours to seconds");
        System.out.println("14. seconds to hours");
        System.out.println("15. exit");
        System.out.print("Enter your choice:");

        option=sc.nextInt();
        switch(option)
        {
        case 1:
                System.out.print("Enter the number of dollars to convert to INR
:");
```

```
                value1=sc.nextDouble();
                value2=CurrencyConverter.dollartoINR(value1);
                System.out.printf("%.2f dollar(s) is equal to %.2f INR.\n",
value1,value2);
                break;
            case 2:
                System.out.print("Enter the INR to convert to dollar:");
                value1=sc.nextDouble();
                value2=CurrencyConverter.INRtodollar(value1);
                System.out.printf("%.2f INR is equal to %.2f dollar(s).\n",
value1,value2);
                break;
            case 3:
                System.out.print("Enter the number of EURO to convert to INR:");
                value1=sc.nextDouble();
                value2=CurrencyConverter.EUROtoINR(value1);
                System.out.printf("%.2f EURO is equal to %.2f INR.\n",
value1,value2);
                break;
            case 4:
                System.out.print("Enter the INR to convert to EURO:");
                value1=sc.nextDouble();
                value2=CurrencyConverter.INRtoEURO(value1);
                System.out.printf("%.2f      INR is equal to %.2f EURO.\n",
value1,value2);
                break;
            case 5:
                System.out.print("Enter the number of yen to convert to INR:");
                value1=sc.nextDouble();
```

```
                value2=CurrencyConverter.yentoINR(value1);
                System.out.printf("%.2f yen is equal to %.2f INR.\n",
value1,value2);
                break;
            case 6:
                System.out.print("Enter the INR to convert to yen:");
                value1=sc.nextDouble();
                value2=CurrencyConverter.INRtoyen(value1);
                System.out.printf("%.2f    INR is equal to %.2f yen.\n",
value1,value2);
            case 7:
                System.out.print("Enter the number of meters to convert to
kilometer:");
                value1=sc.nextDouble();
                value2=DistanceConverter.metertokilometer(value1);
                System.out.printf("%.2f    meter(s) is equal to %.2f kilometers.\n",
value1,value2);
                break;
            case 8:
                System.out.print("Enter the number of kilometers to convert to
meter:");
                value1=sc.nextDouble();
                value2=DistanceConverter.kilometertometer(value1);
                System.out.printf("%.2f    kilometer(s) is equal to %.2f meters.\n",
value1,value2);
                break;
            case 9:
                System.out.print("Enter the number of miles to convert to
kilometer:");
                value1=sc.nextDouble();
```

```
                value2=DistanceConverter.milestokilometer(value1);
                System.out.printf("%.2f    mile(s) is equal to %.2f kilometers.\n",
value1,value2);
                break;
            case 10:
                System.out.print("Enter the number of kilometers to convert to
miles:");
                value1=sc.nextDouble();
                value2=DistanceConverter.kilometertomiles(value1);
                System.out.printf("%.2f kilometer(s) is equal to %.2f miles.\n",
value1,value2);
                break;
            case 11:
                System.out.print("Enter the number of hours to convert to
minutes:");
                value1=sc.nextDouble();
                value2=TimeConverter.hourstominutes(value1);
                System.out.printf("%.2f    hour(s) is equal to %.2f minutes.\n",
value1,value2);
                break;
            case 12:
                System.out.print("Enter the number of minutes to hours:");
                value1=sc.nextDouble();
                value2=TimeConverter.minutestohours(value1);
                System.out.printf("%.2f    minute(s) is equal to %.2f hours.\n",
value1,value2);
                break;
            case 13:
                System.out.print("Enter the number of hours to convert to
seconds:");
```

```
                    value1=sc.nextDouble();
                    value2=TimeConverter.hourstoseconds(value1);
                    System.out.printf("%.2f hour(s) is equal to %.2f seconds .\n",
value1,value2);
                    break;
                case 14:
                    System.out.print("Enter the number of seconds to convert to
hours:");
                    value1=sc.nextDouble();
                    value2=TimeConverter.secondstohours(value1);
                    System.out.printf("%.2f second(s) is equal to %.2f hours.\n",
value1,value2);
                    break;
                case 15:
                    System.out.println("Thankyou for using converter application
!!!");
                    break;
                default:
                    System.out.print("Please enter a valid number !!! ");
                }

                if(option==15)
                {
                    break;
                }
            }

        }
```

}

OUTPUT:

1. dollar to INR conversion
2. INR to dollar conversion
3. EURO to INR conversion
4. INR to EURO conversion
5. yen to INR
6. INR to yen
7. meter to kilometer
8. kilometer to meter
9. miles to kilometer
10. kilometer to miles
11. hours to minutes
12. minutes to hours
13. hours to seconds
14. seconds to hours
15. exit

Enter your choice:11

Enter the number of hours to convert to minutes:5

5.00 hour(s) is equal to 300.00 minutes.

RESULT:

Thus a java console application is developed to find the distace currency and time converter using packages.