

Aim: To develop a java application to implement currency converters, distance converters using package.

Requirement:

- To create class currency converter for conversion of Dollar to Inr, Euro to Inr, Yen to Inr, and vice versa.
- To create distance converter for conversion of meter to km, miles to km and vice versa.
- To create of hours to minutes, hours to second and vice versa.

Algorithm:

STEP-1: Declare the package currency library converter app.

STEP-2 : Declare a class name of currency converter.

STEP-3 : Declare a constructor with initial attribute.

STEP-4 : Declare getdata member and member function.

STEP-5 : Declare class calculation with a static main function.

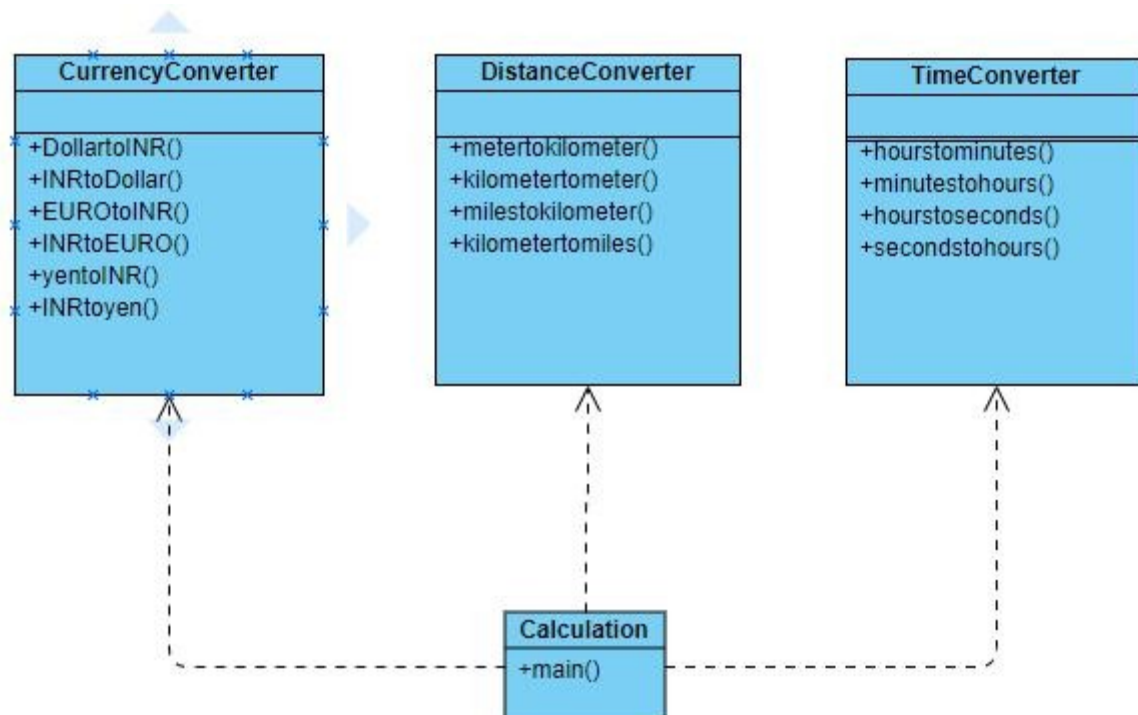
STEP-6 : Create object with dollar, inr, euro, yen.

STEP-7 : Get the input from user.

STEP-8 : Calculate the converter.

STEP-9 : Display result.

Class Diagram:



```

*/created byR. Neha
*/212217105049
*/
currency conerter
package converterlibrary;

public class CurrencyConverter {
    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=77.18*euro;
        return INR;
    }
    public static double INRToeuro(double INR)
    {
        double euro;
        euro=(INR/77.16)+(INR%77.16);
        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 conerter:

```

package converterlibrary;
public class DistanceConverter {
    public static double MeterToKM(double Meter)

```

```

    {
        double Kilometer;
        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;
    }
}

```

time converter

```

package converterlibrary;
public class TimeConverter {
    public static double hoursToMinutes(double hours)
    {
        double minutes;
        minutes=60*hours;
        return minutes;
    }
    public static double minutesToHours(double minutes)
    {
        double hours;
        hours=(minutes/60)+(minutes%60);
        return hours;
    }
    public static double hoursToSeconds(double hours)
    {
        double seconds;
        seconds=3600*hours;
        return seconds;
    }
    public static double secondsToHours(double seconds)

```

```

    {
        double hours;
        hours=(seconds/3600)+(seconds%3600);
        return hours;
    }
}

package converterapp;
import java.util.Scanner;
import converterlibrary.*;
public class Calculation1 {
    public static void main(String[]arg)
    { double a,b;
      int option;
      Scanner sc=new Scanner(System.in);
      while(true)
      {
          System.out.println("1.dollar to INR");
          System.out.println("2.INR to dollar");
          System.out.println("3.euro to inr");
          System.out.println("4.inr to euro");
          System.out.println("5.yen to inr");
          System.out.println("6.inr to yen");
          System.out.println("7.meter to km");
          System.out.println("8.km to meter");
          System.out.println("9.miles to km");
          System.out.println("10.km to nmiles");
          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("exit");
          System.out.print("enter your choice");
          option=sc.nextInt();
          switch(option)
          {

              case 1:
                  System.out.print("Enter Dollars: ");
                  a=sc.nextDouble();
                  b=CurrencyConverter.dollarToINR(a);
                  System.out.printf("%.2f$=%.2fRs \n" , a,b);
                  break;
              case 2:
                  System.out.print("Enter INR: ");
                  a=sc.nextDouble();
                  b=CurrencyConverter.INRTodollar(a);
                  System.out.printf("%.2fRs=%.2f$ \n" , a,b);
                  break;
              case 3:
                  System.out.print("Enter Euro: ");

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        a=sc.nextDouble();
        b=CurrencyConverter.euroToINR(a);
        System.out.printf("%.2f euros=%.2fRs \n" , a,b);
        break;
case 4:
    System.out.print("Enter INR: ");
    a=sc.nextDouble();
    b=CurrencyConverter.INRToeuro(a);
    System.out.printf("%.2fRs=%.2f euros \n" , a,b);
    break;
case 5:
    System.out.print("Enter Yen: ");
    a=sc.nextDouble();
    b=CurrencyConverter.yenToINR(a);
    System.out.printf("%.2fyen=%.2fRs \n" , a,b);
    break;
case 6:
    System.out.print("Enter INR: ");
    a=sc.nextDouble();
    b=CurrencyConverter.INRToyen(a);
    System.out.printf("%.2fRs=%.2fyen \n" , a,b);
    break;
case 7:
    System.out.print("Enter Meters: ");
    a=sc.nextDouble();
    b=DistanceConverter.MeterToKM(a);
    System.out.printf("%.2fm=%.2f kms \n" , a,b);
    break;
case 8:
    System.out.print("Enter KM: ");
    a=sc.nextDouble();
    b=DistanceConverter.KMToMeter(a);
    System.out.printf("%.2fkms=%.2fm \n" , a,b);
    break;
case 9:
    System.out.print("Enter MILES: ");
    a=sc.nextDouble();
    b=DistanceConverter.MilesToKM(a);
    System.out.printf("%.2fmiles=%.2fkms \n" , a,b);
    break;
case 10:
    System.out.print("Enter KM: ");
    a=sc.nextDouble();
    b=DistanceConverter.KMToMiles(a);
    System.out.printf("%.2fkms=%.2fmiles \n" , a,b);
    break;
case 11:
    System.out.print("Enter Hours: ");
    a=sc.nextDouble();
    b=TimeConverter.hoursTominutes(a);
    System.out.printf("%.2fhes=%.2fmins \n" , a,b);
    break;

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        case 12:
            System.out.print("Enter Minutes: ");
            a=sc.nextDouble();
            b=TimeConverter.minutesTohours(a);
            System.out.printf("%.2fmins=%.2fhhrs \n" , a,b);
            break;
        case 13:
            System.out.print("Enter Hours: ");
            a=sc.nextDouble();
            b=TimeConverter.hoursToseconds(a);
            System.out.printf("%.2fhhrs=%.2fsecs \n" , a,b);
            break;
        case 14:
            System.out.print("Enter Seconds: ");
            a=sc.nextDouble();
            b=TimeConverter.secondsTohours(a);
            System.out.printf("%.2fsecs=%.2fhhrs \n" , a,b);
            break;
        case 15:
            break;
        default:
            System.out.println("Please enter a valid
number!!!:");
    }
    if(option==15)
        break;
}
}

```

output:

```

1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice1
Enter Dollars: 250
250.00$=17130.00Rs
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter

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9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice2
Enter INR: 250
250.00Rs=48.09\$
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice3
Enter Euro: 250
250.00 euros=19295.00Rs
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice4
Enter INR: 250
250.00Rs=21.76 euros
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice5

Enter Yen: 250
250.00yen=157.50Rs
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice6
Enter INR: 250
250.00Rs=397.35yen
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice7
Enter Meters: 250
250.00m=250.25 kms
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice8
Enter KM: 250
250.00kms=250000.00m
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen


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7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice9
Enter MILES: 250
250.00miles=402.25kms
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice8
Enter KM: 250
250.00kms=250000.00m
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice9
Enter MILES: 250
250.00miles=402.25kms
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
```

```
exit
enter your choice10
Enter KM: 250
250.00kms=155.98miles
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice11
Enter Hours: 250
250.00hes=15000.00mins
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice12
Enter Minutes: 250
250.00mins=14.17hrs
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice13
Enter Hours: 250
250.00hrs=900000.00secs
1.dollar to INR
2.INR to dollar
3.euro to inr
4.inr to euro
```

```
5.yen to inr
6.inr to yen
7.meter to km
8.km to meter
9.miles to km
10.km to nmiles
11.hours to minutes
12.minutes to hours
13.hours to seconds
14.seconds to hours
exit
enter your choice14
Enter Seconds: 250
250.00secs=250.07hrs
```

Result:

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