Aim:

To develop a Java program that provides functionality for converting currency, distance, and time based on user input.

Algorithm:

1. Initialize the `Scanner` object for user input.

2. Display the main menu and capture the user's choice.

3. Based on the choice, prompt for the specific conversion type and amount.

4. Perform the conversion using corresponding methods from the `currency`, `distance`, and `time` classes.

5. Display the converted value to the user.

6. Loop back to the main menu until the user chooses to exit.

SOURCE CODE:

```java
package labs.converter;
import java.util.Scanner;
public class sample{
    public static void main(String[] args){
        Scanner input=new Scanner(System.in);
        while (true){
            int choice;
            System.out.println("(1) Currency converter");
            System.out.println("(2) Distance converter");
            System.out.println("(3) Time converter");
            System.out.println("(4) exit");
            System.out.println("Enter your choice");
            choice=input.nextInt();

            switch (choice){
                case 1:

                    double amount;
```

```java
System.out.println("(1) Dollar to INR");
System.out.println("(2) EURO to INR");
System.out.println(("(3) yen to INR"));
System.out.println("(4) INR to Dollar");
System.out.println("(5) INR to EURO ");
System.out.println(("(6) INR to yen "));
System.out.println("enter your choice");
int c=input.nextInt();
currency amt =new currency();
System.out.println("Enter the amount");
amount=input.nextDouble();
if(c==1){
    System.out.println(amt.dollar_to_inr(amount));
}
else if (c==2){
    System.out.println(amt.euro_to_inr(amount));
}
else if (c==3){
    System.out.println(amt.yen_to_inr(amount));
}
else if(c==4){
    System.out.println(amt.inr_to_dollar(amount));
}
else if(c==5){
    System.out.println(amt.inr_to_euro(amount));
}
else if(c==6){
    System.out.println(amt.inr_to_yen(amount));
}
else{
    System.out.println("invalid");
}
```

```java
            break;

        case 2:
            int c2;
            double distance1;
            System.out.println("(1) Meters to kilometers");
            System.out.println("(2) miles to kilometer");
            System.out.println("(3) kilometers to meters");
            System.out.println("(4) kilometers to miles");
            System.out.println("Enter your choice");
            c2=input.nextInt();
            distance1=input.nextDouble();
            distance dis=new distance();
            if(c2==1){
                System.out.println(dis.meter_km(distance1));
            }
            else if(c2==2){
                System.out.println(dis.miles_km(distance1));
            }
            else if(c2==3){
                System.out.println(dis.km_meter(distance1));
            }
            else if(c2==4){
                System.out.println(dis.km_miles(distance1));
            }
            else {
                System.out.println("invalid");
            }
            break;
        case 3:
            int c3;
            double time1;
```

```java
        time ti=new time();
        System.out.println("(1) hour to minute");
        System.out.println("(2) hour to second");
        System.out.println("(3) minute to hour");
        System.out.println("(4) second to hour");
        System.out.println("Enter your choice");
        c3=input.nextInt();
        System.out.println("Enter the time:");
        time1=input.nextDouble();

        if(c3==1){
            System.out.println(ti.hour_min(time1));
        }
        else if(c3==2){
            System.out.println(ti.hour_sec(time1));
        }
        else if(c3==3){
            System.out.println(ti.min_hour(time1));
        }
        else if(c3==4){
            System.out.println(ti.sec_hour(time1));
        }
        else {
            System.out.println("invalid");
        }
        break;
    case 4:
        return ;
    default:
        System.out.println("invalid");
    }
}
```

```java
        }
}


package labs.converter;

public class distance {
    public double meter_km(double distance){
        return distance*1000;
    }
    public double miles_km(double distance){
        return distance*1.6;
    }
    public double km_meter(double distance){
        return distance*0.001;
    }
    public double km_miles(double distance){
        return distance*0.62;
    }
}
package labs.converter;

public class time {
    public double hour_min(double time){
        return time*60;
    }
    public double hour_sec(double time){
        return time*3600;
    }
    public double min_hour(double time){
        return time*0.016;
    }
    public double sec_hour(double time){
```

```java
        return time *0.0002;
    }
}


package labs.converter;

public class currency {
    public double dollar_to_inr(double amount){
        return amount* 83.73;
    }
    public double euro_to_inr(double amount){
        return amount * 90.79;
    }
    public double yen_to_inr(double amount){
        return amount *0.54;
    }
    public double inr_to_dollar(double amount){
        return amount* 0.012;
    }
    public double inr_to_euro(double amount){
        return amount * 0.011;
    }
    public double inr_to_yen(double amount){
        return amount *1.84;
```

OUTPUT:

```
"C:\Program Files\Java\jdk-22\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.1.4\lib\idea_rt.jar=63884:C:\Program Files\JetBrains\Int
(1) Currency converter
(2) Distance converter
(3) Time converter
(4) exit
Enter your choice
1
(1) Dollar to INR
(2) EURO to INR
(3) yen to INR
(4) INR to Dollar
(5) INR to EURO
(6) INR to yen
enter your choice
2
Enter the amount
45
4085.55
(1) Currency converter
(2) Distance converter
(3) Time converter
(4) exit
```

```
(1) Currency converter
(2) Distance converter
(3) Time converter
(4) exit
Enter your choice
2
(1) Meters to kilometers
(2) miles to kilometer
(3) kilometers to meters
(4) kilometers to miles
Enter your choice
3
62
0.062
```

```
(1) Currency converter
(2) Distance converter
(3) Time converter
(4) exit
Enter your choice
3
(1) hour to minute
(2) hour to second
(3) minute to hour
(4) second to hour
Enter your choice
2
Enter the time:
5
18000.0
```

```
(1) Currency converter
(2) Distance converter
(3) Time converter
(4) exit
Enter your choice

4

Process finished with exit code 0
```