

Title: Java Control Statement:

Program 1:

```
package ict.tenTwentyOne.ClassName;

public static class sumSeries {
    public static double sumSeries() {
        double sum = 0.0;
        double num = 1.0;
        do {
            sum += num;
            num -= 0.1;
        } while (num >= 0.01);
        return Math.round(sum * 100.0) / 100.0;
    }
}
```

Program 2:

```
package ict.tenTwentyOne.className;

public class DivisorMultiple {
    public static int gcd(int a, int b) {
        do {
            int temp = b;
            b = a % b;
            a = temp;
        } while (b != 0);
        return a;
    }
}
```

```

    public static int lcm(int a, int b) {
        return (a * b) / gcd(a, b);
    }
}

```

Programs:

```

Package net.twentyOne.ClassName;

```

```

public class NumberConversionClass {

```

```

    public static String decimalToBinary(int n) {

```

```

        return Integer.toBinaryString(n);

```

```

    } public static String decimalToHex(int n) {

```

```

        return Integer.toOctalString(n);

```

```

    }

```

```

    public static int toBinaryToDecimal(int n) {

```

```

        return Integer.parseInt(bin, 2);

```

```

    }

```

```

    public static int octalToDecimal(String oct) {

```

```

        return Integer.parseInt(oct, 8);

```

```

    }

```

```

    public static int hexToDecimal(String hex) {

```

```

        return Integer.parseInt(hex, 16);

```

```

    }

```

```

}

```

Program 4:

```
Package iet.twentyTwo.className;  
public class CustomPrintClass {  
    public static void prc(String message) {  
        System.out.println("[CustomPrint] + message);
```

```
}
```

```
};
```

Program 5:

```
Package iet.twentyTwo.className;  
public class MainClass {  
    static SumClass sumClass = new SumClass();  
    static DivisorMultipleClass divMulCls = new DivisorMultipleClass();  
    static NumberConversionClass numConvClass = new NumberConversionClass();  
    static CustomPrintClass customPrint = new CustomPrintClass();  
    public static void main(String[] args) {  
        double total = sumClass.sumSeries();  
        CustomPrintClass.prc("Sum of series = " + total);  
        int a = 24, b = 36;  
        CustomPrintClass.prc("GCD of " + a + b + " = " + DivisorMultipleClass.gcd(a, b));  
        CustomPrintClass.prc("LCM of " + a + b + " = " + DivisorMultipleClass.lcm(a, b));  
        int number = 45;  
        CustomPrintClass.prc(number + " in Binary: " + NumberConversionClass.decimal  
            toBinary(number));  
        CustomPrintClass.prc("Decimal " + number + " in Hex: " +  
            NumberConversionClass.decimalToHex(number));
```



```
CustomPrintClass.pr("Decimal "+number+" in Octal: "+ NumberConversion  
class.decimalToOctal(number));
```

```
CustomPrintClass.pr("Binary 101101 to Decimal: "+ NumberConversion  
sionClass.binaryToDecimal("101101"));
```

```
CustomPrintClass.pr("Octal 55 to Decimal: "+ NumberConversion.  
class.octalToDecimal("55"));
```

```
CustomPrintClass.pr("Hex 2D to Decimal: "+ NumberConversion.  
Class.hexToDecimal("2D"));
```

```
}
```

```
} .
```