

### **Program 1 : Displaying Command Line Arguments**

```
public class hello{
    public static void main(String[] args)
    {
        for(int i=0;i<args.length;i++)
            System.out.println(args[i]);
    }
}
```

#### **Output :**

hello  
world

---

### **Program 2 : Program to Print a Welcome Message**

```
public class SY
{
    public static void main(String[] args)
    {
        System.out.println("Welcome in SY class");
    }
}
```

#### **Output :**

Welcome in SY class

---

### **Program 3 : Program to Print Even Numbers from 1 to 10 and Find Their Sum and Count**

```
public class even
{
    public static void main(String[] args)
    {
        int evensum=0;
        int evencount=0;
        for(int i=1 ; i<=10; i++)
        {
            if(i%2==0)
            {
                System.out.println(i);
                evensum+=i;
                evencount+=1;
            }
        }
    }
}
```

```

    }
    System.out.println("Even Sum : " +evensum);
    System.out.println("Even count : "+evencount);

}
}

```

### Output :

```

2
4
6
8
10
Even Sum : 30
Even count : 5

```

---

### Program 4 : Program to Print Odd Numbers from 1 to 10 and Find Their Sum and Count

```

public class odd
{
    public static void main(String[] args)
    {
        int oddsum=0;
        int oddcount=0;
        for(int i=1 ; i<=100 ; i++)
        {
            if(i%2!=0)
            {
                System.out.println(i);
                oddsum+=i;
                oddcount+=1;
            }
        }
        System.out.println("Odd Sum : " +oddsum);
        System.out.println("Odd count : " +oddcount);

    }
}

```

## Output :

1  
3  
5  
7  
9  
Odd Sum : 25  
Odd count : 5

---

## Program 5 : Program to Find Armstrong Numbers Between 1 and 1000

```
public class armstrongno
{
    static boolean isArmstrong(int x)
    {
        int rem;
        int temp=x;
        int digits=0;
        int sum=0;
        while(temp!=0)
        {
            digits++;
            temp/=10;
        }
        temp=x;
        while(temp!=0)
        {
            rem=temp%10;
            int m=1;
            for(int i=1;i<=digits;i++)
            {
                m*=rem;
            }
            sum+=m;
            temp/=10;
        }
        if(sum==x)
            return true;
        else
            return false;
    }
    public static void main(String[] args)
    {
        for(int i=1;i<=1000;i++)
        {
            if(isArmstrong(i))
            {
```

```

        System.out.println(i);
    }
}
}

```

### Output :

```

1
2
3
4
5
6
7
8
9
153
370
371
407

```

---

### Program 6 : Program to Initialize an Array and Calculate Its Sum

```

public class array
{
    public static void main(String[] args)
    {
        int[] a = {2,4,3,1};
        int sum=0;
        for(int i=0;i<a.length;i++)
        {
            sum+=a[i];
        }
        System.out.println("sum is : "+sum);
    }
}

```

### Output :

```

sum is : 10

```

---

### **Program 7 : Program to Accept User Input Using Scanner Class**

```
import java.util.*;
public class input
{
    public static void main(String[] args)
    {
        Scanner console = new Scanner(System.in);
        System.out.println("Enter your age : ");
        int age = console.nextInt();
        System.out.println("Your Age : "+age);

        System.out.print("Enter your birth month : ");
        String month = console.next();
        System.out.println("Your birth month : "+month);
    }
}
```

#### **Output :**

```
Enter your age : 18
Your Age : 12
Enter your birth month : 2007
Your birth month : 2007
```

---

### **Program 8 : Program to Check Whether a Number is Palindrome or Not**

```
import java.util.Scanner;

class palindrome
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a number : ");
        int n = sc.nextInt();
        int temp = n;
        int rem;
        int rev=0;

        while(temp!=0)
        {
            rem = temp%10;
            rev = rev*10+rem;
            temp/=10;
        }

        if(rev==n)
```

```

        {
            System.out.println("Number is Palindrome");
        }
        else
        {
            System.out.println("Number is not a Palindrome");
        }
    }
}

```

### Output :

Enter a number : 121  
Number is Palindrome

Enter a number : 123  
Number is not a Palindrome

### Program 9 : Program to Display Palindrome Numbers from 1 to 100

```

public class palindromeno
{
    static boolean isPalindrome(int x)
    {
        int temp=x;
        int rem;
        int rev=0;
        while(temp!=0)
        {
            rem = temp%10;
            rev = rev*10+rem;
            temp/=10;
        }

        if(rev==x)
        {
            return true;
        }
        else
        {
            return false;
        }
    }
    public static void main(String[] args)
    {
        for(int i=1;i<=100;i++)
        {

```

```

        if(isPalindrome(i))
        {
            System.out.println(i);
        }
    }
}

```

### Output :

```

1
2
3
4
5
6
7
8
9
11
22
33
44
55
66
77
88
99

```

---

### Program 10 : Program to Display Prime Numbers from 1 to 10

```

import java.util.*;

public class prime
{
    static boolean isPrime(int x)
    {
        if(x<=1)
        {
            return false;
        }

        for(int i=2;i<=Math.sqrt(x);i++)
        {
            if(x%i==0)
            {
                return false;
            }
        }
    }
}

```

```

        }
        return true;
    }
    public static void main(String[] args)
    {
        for(int i=1;i<10;i++)
        {
            if(isPrime(i))
            {
                System.out.println(i);
            }
        }
    }
}

```

### Output :

```

2
3
5
7

```

---

### Program 11 : Program to Swap Two Numbers Using Different Techniques

```

import java.util.Scanner;
public class swap
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter value a : ");
        int a = sc.nextInt();
        System.out.println("Enter value b : ");
        int b = sc.nextInt();

        System.out.println("Using third variable : ");
        System.out.println("Values before swapping : " + a + " " + b);
        int temp = a;
        a = b;
        b = temp;
        System.out.println("Swapped Values of a and b are : " + a + " " +
b);

        System.out.println("Using add and subtract : ");
        System.out.println("Values before swapping : " + a + " " + b);
        a = a+b;

```

```

        b = a-b;
        a = a-b;
        System.out.println("Swapped Values of a and b are : " + a + " " +
b);

        System.out.println("Using multiply and divide : ");
        System.out.println("Values before swapping : " + a + " " + b);
        a = a*b;
        b = a/b;
        a = a/b;
        System.out.println("Swapped Values of a and b are : " + a + " " +
b);

        System.out.println("Using bitwise operator : ");
        System.out.println("Values before swapping : " + a + " " + b);
        a = a^b;
        b = a^b;
        a = a^b;
        System.out.println("Swapped Values of a and b are : " + a + " " +
b);
    }
}

```

### Output :

```

Enter value a :
10
Enter value b :
20
Using third variable :
Values before swapping : 10 20
Swapped Values of a and b are : 20 10
Using add and subtract :
Values before swapping : 20 10
Swapped Values of a and b are : 10 20
Using multiply and divide :
Values before swapping : 10 20
Swapped Values of a and b are : 20 10
Using bitwise operator :
Values before swapping : 20 10
Swapped Values of a and b are : 10 20

```

---

## **Program 12 : Program to Demonstrate Class and Object Concepts in Java**

```
import java.util.*;
class student{
    String name;
    String prn;
    String lname;
    int rollno;
    float cgpa;
    String div;
    String Class;
}

public class SY_AS2{
    public static void main(String[] args)
    {
        student s = new student();
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter Class : ");
        s.Class = sc.next();
        System.out.print("Enter Division : ");
        s.div = sc.next();
        System.out.print("Enter First Name : ");
        s.name = sc.next();
        System.out.print("Enter Last Name : ");
        s.lname = sc.next();
        System.out.print("Enter PRN : ");
        s.prn = sc.next();
        System.out.print("Enter Roll No. : ");
        s.rollno = sc.nextInt();
        System.out.print("Enter CGPA : ");
        s.cgpa = sc.nextFloat();

        System.out.println("\nClass : " + s.Class);
        System.out.println("Division : " + s.div);
        System.out.println("Name : " + s.name + " " + s.lname);
        System.out.println("PRN : " + s.prn);
        System.out.println("Roll No. : " + s.rollno);
        System.out.println("Marks : " + s.cgpa);
    }
}
```

**Output :**

Enter Class : SY  
Enter Division : A  
Enter First Name : Hrushi  
Enter Last Name : Thombare  
Enter PRN : 0124UCSM1030  
Enter Roll No. : 30  
Enter CGPA : 9.24  
Class : SY  
Division : A

Name : Hrushi Thombare  
PRN : 0124UCSM1030  
Roll No. : 30  
Marks : 9.24

---

**Program 13 : Program to Demonstrate Arithmetic Operators in Java**

```
class ArithmeticOperations {  
    public static void main(String[] args) {  
        int a = 10, b = 5;  
        System.out.println(a + b);  
        System.out.println(a - b);  
        System.out.println(a * b);  
        System.out.println(a / b);  
        System.out.println(a % b);  
    }  
}
```

**Output :**

15  
5  
50  
2  
0

---

**Program 14 : Program to Demonstrate Shorthand Operators in Java**

```
class ShorthandOperators {  
    public static void main(String[] args) {  
        int value = 10;  
        value += 5;  
        value -= 2;  
        value *= 2;  
        value /= 2;  
    }  
}
```

```
        System.out.println(value);
    }
}
```

**Output :**

13

---

### **Program 15 : Program to Demonstrate Pre and Post Increment Decrement in Java**

```
class IncrementDecrementDemo {
    public static void main(String[] args) {
        int number = 5;
        System.out.println(++number);
        System.out.println(number++);
        System.out.println(--number);
        System.out.println(number--);
    }
}
```

**Output :**

6  
6  
6  
6

---

### **Program 16 : Program to Demonstrate Boolean Data Type in Java**

```
class BooleanExample {
    public static void main(String[] args) {
        boolean isJavaEasy = true;
        boolean isMathHard = false;
        System.out.println(isJavaEasy);
        System.out.println(isMathHard);
    }
}
```

**Output :**

true  
false

---

### **Program 17 : Program to Demonstrate Bitwise Operators in Java**

```
class BitwiseOperatorsDemo {  
    public static void main(String[] args) {  
        int a = 5, b = 3;  
        System.out.println(a & b);  
        System.out.println(a | b);  
        System.out.println(a ^ b);  
        System.out.println(~a);  
    }  
}
```

#### **Output :**

```
1  
7  
6  
-6
```

---

### **Program 18 : Program to Demonstrate Logical Operators in Java**

```
class LogicalOperatorsDemo {  
    public static void main(String[] args) {  
        int x = 10, y = 20;  
        System.out.println(x < y && y > 10);  
        System.out.println(x > y || y > 10);  
        System.out.println(!(x < y));  
    }  
}
```

#### **Output :**

```
true  
true  
false
```

---

### **Program 19 : Program to Demonstrate String Equality Check in Java**

```
class StringEqualityCheck {  
    public static void main(String[] args) {  
        String language1 = "Java";  
        String language2 = "Java";  
        System.out.println(language1.equals(language2));  
    }  
}
```

**Output :**

true

---

**Program 20 : Program to Demonstrate Type Casting in Java**

```
class TypeCastingDemo {  
    public static void main(String[] args) {  
        int intValue = 10;  
        double doubleValue = intValue;  
        double price = 9.8;  
        int roundedPrice = (int) price;  
        System.out.println(doubleValue);  
        System.out.println(roundedPrice);  
    }  
}
```

**Output :**

10.0  
9

---

**Program 21 : Program to Demonstrate Break Statement Using Switch Case in Java**

```
class SwitchBreakExample {  
    public static void main(String[] args) {  
        int dayNumber = 2;  
        switch(dayNumber) {  
            case 1: System.out.println("Monday"); break;  
            case 2: System.out.println("Tuesday"); break;  
            default: System.out.println("Invalid Day");  
        }  
    }  
}
```

**Output :**

Tuesday

---

## **Program 22 : Program to Demonstrate Continue and Break Statements in Java**

```
class ContinueBreakExample {  
    public static void main(String[] args) {  
        for(int i = 1; i <= 5; i++) {  
            if(i == 3) continue;  
            if(i == 5) break;  
            System.out.println(i);  
        }  
    }  
}
```

### **Output :**

```
1  
2  
4
```

---