

# JAVA BASIC PROGRAMS

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## Sum of Two Numbers

This program uses the getsum method to add two integers and return their total. This is a basic arithmetic operation.

Java

```
public class BasicPrograms {  
    // This method takes two integer inputs and returns their sum[cite: 3, 4].  
    public static int getsum(int number1, int number2) {  
        return number1 + number2;  
    }  
}
```

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## Swap Two Numbers Without a Third Variable

The swap method demonstrates how to exchange the values of two variables using only arithmetic operations, avoiding the need for a temporary variable. The original code provided had a logical error, so the corrected version is shown below<sup>1</sup>.

Java

```
public class BasicPrograms {  
    // This method swaps the values of two numbers without using a third variable.  
    // The original code was incorrect and has been fixed.  
    public static void swap(int number1, int number2) {  
        System.out.println("Before Swap:->");  
        System.out.println("Number1 is:" + number1);  
        System.out.println("Number2 is:" + number2);  
  
        // Corrected logic for swapping  
        number1 = number1 + number2;  
        number2 = number1 - number2;  
        number1 = number1 - number2;  
  
        System.out.println("After Swap:->");  
        System.out.println("Number1 is:" + number1);  
        System.out.println("Number2 is:" + number2);  
    }  
}
```

---

## Check if a Number is Odd or Even

The Isevenorodd method determines if a number is even or odd by using the modulo operator (%). A number is considered even if its remainder is 0 when divided by 2. Otherwise, it is odd.

Java

```
public class BasicPrograms {  
    // This method checks if a number is odd or even using the modulo operator[cite: 18].  
    // If the number divided by 2 has a remainder of 0, it is even[cite: 20, 21].  
    // Otherwise, the number is odd[cite: 23, 24].  
    public static void Isevenorodd(int number) {  
        if (number % 2 == 0) {  
            System.out.println(number + " Number is Even");  
        } else {  
            System.out.println(number + " Number is Odd");  
        }  
    }  
}
```

---

## Check if a String is a Proper Number

The ISnumber method checks whether a given string consists solely of digits. It iterates through each character and verifies that it is a digit from '0' to '9'. If a non-digit character is found, it determines that the string is not a proper number and exits the loop.

Java

```
public class BasicPrograms {  
    // This method checks if a string contains only numeric characters[cite: 27, 28].  
    // It loops through each character of the string[cite: 30].  
    // If a character is not within the range '0' to '9', it prints that the string is not a proper number[cite: 31, 32, 33].  
    // The boolean 'temp' is used to track the validity of the string[cite: 29].  
    public static void ISnumber(String arr) {  
        boolean temp = true;  
        for (int i = 0; i < arr.length(); i++) {  
            if (arr.charAt(i) < '0' || arr.charAt(i) > '9') {  
                System.out.print(arr);  
                System.out.println(" Not a Proper number");  
                temp = false;  
                break;  
            }  
        }  
    }  
}
```

```

if(temp) {

    System.out.print(arr);

    System.out.println(" Given number is proper");

}

}

```

```

1 public class BasicPrograms
2 {
3     //Two number Addition
4     public static int getsum(int number1,int number2){
5         return number1+number2;
6     }
7     //without third variate usage
8     public static void swap(int number1,int number2){
9         System.out.println(x:"Before Swap:->");
10        System.out.println("Number1 is:" +number1);
11        System.out.println("Number2 is:" +number2);
12        number2=number1+number2;
13        number1=number2-number1;
14        number2=number2-number1;
15        System.out.println(x:"After Swap:->");
16        System.out.println("Number1 is:" +number1);
17        System.out.println("Number2 is:" +number2);
18    }
19
20    //Number is Odd or Even
21    public static void Isevenorodd(int number){
22        if(number % 2==0){
23            System.out.println(number + " Number is Even" );
24        }
25        else{
26            System.out.println(number + " Number is Odd");
27        }
28    }
29    //ISnumber
30    public static void ISnumber(String arr){
31        boolean temp = true;
32        for(int i=0;i<arr.length();i++){
33            if(arr.charAt(i)<'0' || arr.charAt(i)>'9'){
34                System.out.print(arr);
35                System.out.println(x:" Not a Proper number");
36                temp=false;
37                break;
38            }

```

```

39    }
40    if(temp){
41        System.out.print(arr);
42        System.out.println(x:" Given number is proper");
43    }
44    }
45
46    Run | Debug
47    public static void main(String[] args) {
48        System.out.println("Sum of two numbers:" + getsum(number1:2,number2:3));
49        System.out.println();
50        swap(number1:2, number2:9);
51        System.out.println();
52        Isevenorodd(number:3);
53        Isevenorodd(number:4);
54        System.out.println();
55        ISnumber(arr:"1a0");
56        ISnumber(arr:"10");
57    }

```

Sum of two numbers:5

Before Swap:->  
Before Swap:->  
Number1 is:2  
Number2 is:9  
After Swap:->  
Number1 is:9  
Number2 is:2

3 Number is Odd  
4 Number is Even

1a0 Not a Proper number  
10 Given number is proper

PS C:\Users\Wivek > G V\OneDrive\Desktop\Alg365Java>

