JAVA BASIC PROGRAMS

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;
   }
}
```

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[1].

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");
        }
    }
}
```