

```

/*
 * ParameterPassingTest.java
 *
 * Created on May 16, 2005
 *
 * Author: Paolo Bucci
 *
 * Program to test the parameter passing mechanism in Java.
 */

public class ParameterPassingTest
{
    public static void main(String[] args)
    {
        // Passing primitive type values
        int i = 1;
        double d = -2.4;
        char c = '?';
        boolean b = true;
        testPrimitiveTypes(i, d, c, b);
        System.out.println(i + ", " + d + ", " + c + ", " + b);

        // Passing array values - test 1
        int [] a = {0, 0, 0, 0, 0, 0, 0, 0, 0, 0};
        testArray1(a);
        for (int pos = 0; pos < a.length; pos++)
        {
            System.out.print(a[pos] + " ");
        }
        System.out.println();

        // Passing array values - test 2
        testArray2(a);
        for (int pos = 0; pos < a.length; pos++)
        {
            System.out.print(a[pos] + " ");
        }
        System.out.println();

        // Passing String values
        String s = "This is a test";
        testString(s);
        System.out.println(s);
    }

    /*
     * Modifies formal parameter values, but does not change
     * values of actual parameters when of a primitive type.
     */
    private static void testPrimitiveTypes(int i, double d, char c,
                                           boolean b)
    {
        // What are the values of i, d, c, and b here?
        i = 7;
        d = 3.14;
        c = 'Y';
        b = false;
        // What are the values of i, d, c, and b here?
    }
}

```

```

/*
 * Modifies array elements of formal parameter and changes
 * values of elements of actual array parameter.
 */
private static void testArray1(int[] a)
{
    // What are the values of a and of a's elements here?
    for (int pos = 0; pos < a.length; pos++)
    {
        a[pos] = pos;
    }
    // What are the values of a and of a's elements here?
}

```

```

/*
 * Modifies formal array parameter, but does not change
 * value of actual parameter when of an array type.
 */
private static void testArray2(int[] a)
{
    // What are the values of a and of a's elements here?
    a = new int[5];
    for (int pos = 0; pos < a.length; pos++)
    {
        a[pos] = 1;
    }
    // What are the values of a and of a's elements here?
}

```

```

/*
 * Modifies formal parameter value, but does not change
 * value of actual parameter.
 */
private static void testString(String s)
{
    // What is the value of s here?
    s = "new value";
    // What is the value of s here?
}

```

```

}

```