

Signature _____

CSE 11

Name _____

Quiz 3

cs11f _____

Fall 2013

Student ID _____

This quiz is to be taken **by yourself** with closed books, closed notes, no calculators.

What gets printed when the following program is run?

```
public class While
{
    public static void main( String[] args )
    {
        final int MAX = 8;
        int i = 2, j = -2;

        System.out.println( i + " " + j );

        while ( i <= MAX )
        {
            j = i + 1;

            while ( j < MAX )
            {
                j += 3;
                System.out.println( i + " " + j );
            }

            i += 2;
        }

        System.out.println( i + " " + j );
    }
}
```



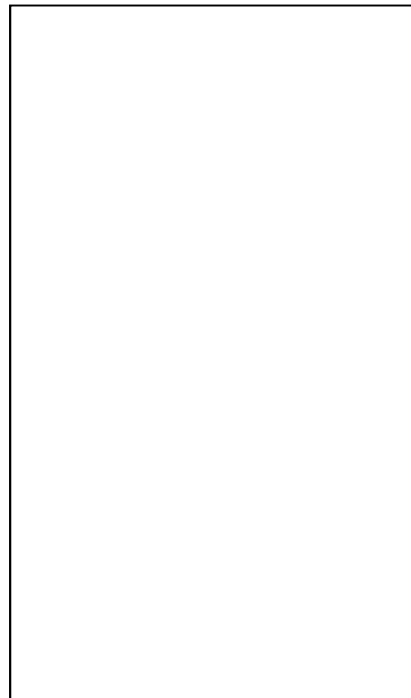
Trace the following program and specify its output.

```
public class Trace
{
    public static void main( String[] args )
    {
        System.out.println( "main1" );
        foo1();
        System.out.println( "main2" );
        foo3();
        System.out.println( "main3" );
        foo2();
    }

    public static void foo1()
    {
        foo3();
        System.out.println( "A" );
    }

    public static void foo2()
    {
        System.out.println( "B" );
    }

    public static void foo3()
    {
        System.out.println( "C" );
        foo2();
    }
}
```



We usually define instance variables with the access modifier _____ while we usually define ctors and methods we want to be part of this type's published interface with the access modifier _____.

JButton is an example of a GUI _____ while a JPanel is an example of a GUI _____ which has a layout manager.

Given the following definitions:

```
public interface Printable
{
    public static final String ORIENTATION = "Portrait";
    public abstract void print( boolean doubleSided );
}
```

```
class Thing1 implements Printable
{
    public Thing1()
    {
        // ctor initialization here
    }

    public void print( boolean doubleSided )
    {
        // print either single/double sided
    }

    public void print()
    {
        // print single sided by default
        this.print( false );
    }
}
```

```
class Thing2 implements Printable
{
    public Thing2()
    {
        // ctor initialization here
    }

    public void print( boolean doubleSided )
    {
        // print either single/double sided
    }

    public void print( String orientation )
    {
        ORIENTATION = orientation; /* A */

        // print single sided by default
        this.print( false );
    }
}
```

And the following variable definitions and code are in some other class:

```
Thing1 thing1;
Thing2 thing2;
Printable printable;
```

Indicate which are valid Java statements. Consider each statement executed sequentially in the order it appears.

- 1) Valid Java statement – No Compiler Error
- 2) Invalid Java statement – Compiler Error

Hint: What does the compiler know about any reference variable at compile time (vs. run time)?

```
thing1 = new Thing1(); _____
thing1.print(); _____
thing1.print( true ); _____
thing1.print( "Landscape" ); _____
thing2 = new Thing2(); _____
thing2.print(); _____
thing2.print( true ); _____
thing2.print( "Landscape" ); _____
The line marked /* A */ in class Thing2:
ORIENTATION = orientation; _____
```

```
printable = new Thing1(); _____
printable.print(); _____
printable.print( true ); _____
printable = thing2; _____
printable.print( "Landscape" ); _____
printable.print( true ); _____
printable = new Printable(); _____
thing1 = thing2; _____
thing1 = printable; _____
```