

Signature _____

CSE 11

Name _____

Quiz 3

cs11f _____

Fall 2012

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 = 5;
        int i = 3, j = -1;

        while ( i < MAX )
        {
            j = i;
            while ( j <= MAX )
            {
                --j;
                System.out.println( i + " " + j );
                j += 2;
            }
            i++;
        }

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



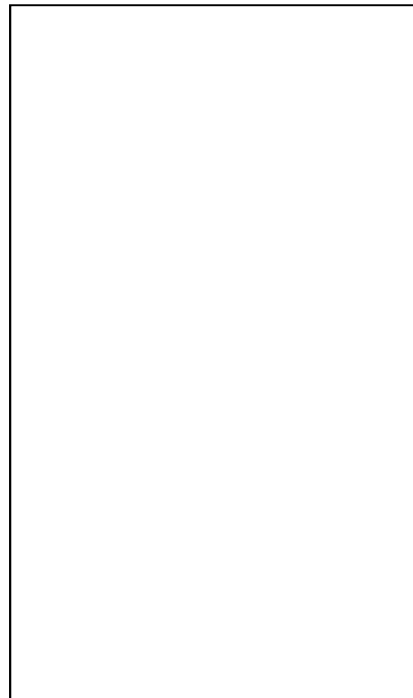
Trace the following program and specify its output.

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

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

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

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



An object which is defined to handle action events must implement the _____

interface and provide a body/implementation for the abstract method named _____.

A GUI _____ has a layout manager which defines how GUI _____ are laid out.

Given the following definitions:

```
public interface Speakable
{
    public abstract String speak();
}
```

```
class Thing1 implements Speakable
{
    private static final String SPEAK = "Me";

    public Thing1()
    {
        // ctor initialization here
    }

    public String speak()
    {
        return SPEAK;
    }

    public void doit( String s )
    {
        // Thing1 does its thing with s
    }
}
```

```
class Thing2 implements Speakable
{
    public static final String SPEAK = "No, Me";

    public Thing2()
    {
        // ctor initialization here
    }

    public String speak()
    {
        return SPEAK;
    }

    public void doit()
    {
        // Thing2 does its thing
    }
}
```

And the following variable definitions:

```
Thing1 thing1;
Thing2 thing2;
Speakable speakable;
```

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

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

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

```
thing1 = new Thing1(); _____
thing1.speak(); _____
thing1.doit(); _____
thing1.doit( "Yours" ); _____
String s1 = Thing1.SPEAK; _____
thing2 = new Thing2(); _____
thing2.doit( "Theirs" ); _____
thing2.speak(); _____
thing2.doit(); _____
```

```
String s2 = Thing2.SPEAK; _____
speakable = new Speakable(); _____
thing1 = thing2; _____
thing1 = speakable; _____
speakable = new Thing1(); _____
speakable.speak(); _____
speakable.doit( "Mine" ); _____
speakable = thing2; _____
speakable.speak(); _____
speakable.doit(); _____
```