

Chap 4.11

Exercise 1

The point of this exercise is to practice reading code and to make sure that you understand the flow of execution through a program with multiple methods.

1. What is the output of the following program? Be precise about where there are spaces and where there are newlines.

Hint: Start by describing in words what ping and baffle do when they are invoked.

2. Draw a stack diagram that shows the state of the program the first time ping is invoked.
3. What happens if you invoke baffle(); at the end of the ping method? (We will see why in the next chapter.)

```
public static void zoop() {
    baffle();
    System.out.print("You wugga ");
    baffle();
}

public static void main(String[] args) {
    System.out.print("No, I ");
    zoop();
    System.out.print("I ");
    baffle();
}

public static void baffle() {
    System.out.print("wug");
    ping();
}

public static void ping() {
    System.out.println(".");
}
```

1. The output

No, I wug.

You wugga wug.

I wug.

The first thing invoked was main(), and zoop(), baffle(), and ping() followed respectively.

2. Stack diagram when ping() was invoked.

main
zoop
baffle
ping

3. There is an infinite loop when baffle() is invoked at the end of ping().

I had the followed for Mystery.java.

```
import java.io.*;
import java.util.*;

public class Mystery
{
    public static void zoop()
    {
        baffle();
        System.out.print("You wugga ");
        baffle();
    }

    public static void main(String[] args)
    {
        System.out.print("No, I ");
        zoop();
        System.out.print("I ");
        baffle();
    }

    public static void baffle()
    {
        System.out.print("wug");
        ping();
    }

    public static void ping()
    {
        System.out.println(".");
        baffle();
    }
}
```