

**CSE 142, Autumn 2006**  
**Programming Assignment #1 (Six Days of "Xmas")**  
**Due: Thursday, October 5, 2006, 11:59 PM**

**Program Description:**

This program tests your understanding of using static methods and `println` statements. You should write a Java class called `SixDays` that should be saved into a file called `SixDays.java`. Your program should produce the following song as output:

```
On the 1st day of "Xmas", my true love sent to me  
a partridge in a pear tree.
```

```
On the 2nd day of "Xmas", my true love sent to me  
two turtle doves, and  
a partridge in a pear tree.
```

```
On the 3rd day of "Xmas", my true love sent to me  
three French hens,  
two turtle doves, and  
a partridge in a pear tree.
```

```
On the 4th day of "Xmas", my true love sent to me  
four calling birds,  
three French hens,  
two turtle doves, and  
a partridge in a pear tree.
```

```
On the 5th day of "Xmas", my true love sent to me  
five golden rings,  
four calling birds,  
three French hens,  
two turtle doves, and  
a partridge in a pear tree.
```

```
On the 6th day of "Xmas", my true love sent to me  
six geese a-laying,  
five golden rings,  
four calling birds,  
three French hens,  
two turtle doves, and  
a partridge in a pear tree.
```

The song is a modified version of a classic holiday song. We have reduced the days from the original twelve to six to keep the program's length manageable, and we have used the term "Xmas" as the holiday name.

You should exactly reproduce the format of this output. This includes having identical wording, spelling, spacing, punctuation, and capitalization. Please do not include additional verses, such as writing twelve days to match the complete classic song.

One way to write this program would be to simply write a `println` statement that outputs each line of the song in order. However, such a solution would not receive full credit. Part of the challenge of this assignment lies in recognizing the structure and redundancy of the song and improving the code using static methods.

## Stylistic Guidelines:

You should not place any `println` statements in your `main` method. Use static methods in this program, for two reasons:

1. To capture the structure of the song's six verses.

You should be using static methods to capture the structure of the song. You should, for example, have a different method for each verse of the song.

2. To avoid simple redundancy in the output.

Also, you are to make sure that you use only one `println` statement for each distinct line of the song. For example, this line appears several times in the output, but you should have only one `println` statement in your program that prints that line of the song:

```
a partridge in a pear tree.
```

There is more complex redundancy in the song that has to do with parts of pairs of lines, like these:

```
On the 1st day of "Xmas", my true love sent to me  
On the 2nd day of "Xmas", my true love sent to me
```

But it is not possible to avoid this partial-line redundancy using just what we have learned so far (static methods and simple `println` statements), so you are not expected to eliminate it. There is, however, a general structural redundancy to the song that you can eliminate with static methods. The key question to ask yourself is whether or not you have repeated lines of code that could be eliminated if you structured your static methods differently.

You are not allowed to use more advanced features than what we have covered in class. For this assignment, you should limit yourself to the Java features covered in Chapter 1 of the textbook.

You should include a comment at the beginning of your program with some basic information and a description of the program, such as:

```
// Suzy Student  
// CSE 142, Autumn 2006, Section XX  
// Programming Assignment #1, 01/02/03  
//  
// This program's behavior is ...
```

The comments in your program should be written in your own words and not copied from this document.

## Submission and Grading:

Turn in your `SixDays.java` file electronically from the Assignments link on the course web page. Please make sure to use exactly this file name, including identical capitalization.

Part of your program's score will come from its "external correctness." External correctness measures whether the output matches exactly what is expected. (We are *very picky* about the output matching exactly!) Programs that do not compile will receive no external correctness points.

The rest of your program's score will come from its "internal correctness." Internal correctness measures whether your source code follows the stylistic guidelines specified in this document. This includes having an adequate comment header and capturing the structure and redundancy of the song as specified previously.