

# CS 1331 Extra Credit Homework

Due Saturday April 5, 2013 8:00PM

## Introduction

This homework will cover generic typing, inner classes, integer bit-shifting, ternary operators, instantiating objects with private constructors, polymorphism, and advanced variable shadowing. Additionally, we will explore the importance of code readability by means of extreme contrast, in the context of reverse-engineering and obfuscation.

## Overview

You are given three .java files to do this project: **ECDriver.java**, **O.java**, and **\_\_.java**. You are *only* to modify **ECDriver.java**, do *not* edit the other two files. You are not allowed to make any additional .java files for this assignment.

For this project, you will complete the main method of **ECDriver.java**, so that the program outputs the following text when run (*without* the quotes):

**"Congratulations, you did it!"**

However, when implementing this simple task, you must follow these restrictions:

- **All of your code** must be inside the main method of ECDriver.java
- Your final code may not contain more than one semicolon character (;)
  - By extension, your code should consist only of a single legal Java statement.
- In addition to a *single semicolon*, you may use any number of these characters (*but no others*):
  - `_` (the underscore)
  - `.` (the period, or 'dot')
  - `(` (the open-parenthesis)
  - `)` (the close-parenthesis)
  - `,` (the comma)
  - `O` (the capital letter 'O')
  - Any whitespace character (space, tab, newline, etc)

Homeworks which contain illegal characters will lose 10% for each instance of an illegal character (to a minimum of 0% credit if at least 10 illegal characters are present).

This may seem impossible, but it is not. It can be done by carefully reading and understanding the contents of **O.java**, and **\_\_.java**. There are multiple possible ways to complete this assignment within the restrictions outlined above, in fact, there are technically infinitely many solutions. Our solution consists of about 28 lines of code.

## Turn-in Procedure

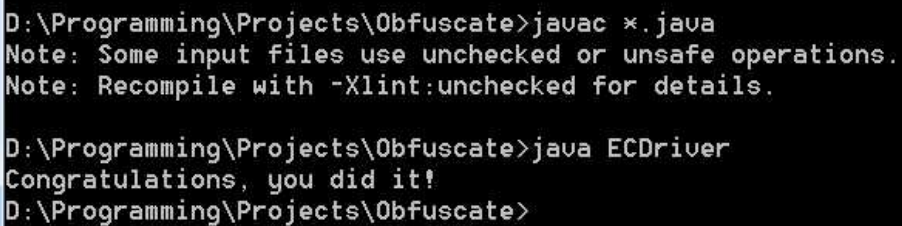
Turn in the following files on T-Square. When you're ready, double-check that you have submitted and not just saved as draft.

- ECDriver.java

javadocs are not required for this assignment.

Note that compiling your assignment will probably generate warnings of “unchecked or unsafe operations.” For this assignment, you can ignore these warnings.

Output of successful implementation:



```
D:\Programming\Projects\Obfuscate>javac *.java
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.

D:\Programming\Projects\Obfuscate>java ECDriver
Congratulations, you did it!
D:\Programming\Projects\Obfuscate>
```