

Graded: Circle the bullet in front of each statement that accurately describes your instructor's course policies:

- Having a copy of all or part of another student's source code, just to look at for a little help, is considered cheating.
- You must submit every lab assignment in order to pass this course.
- The final exam for this course will be comprehensive.
- If you miss more than three lectures, your grade will be dropped by half a letter grade.
- If you don't do your homework you will not be allowed to attend some classes.
- All students must submit a copy of their lecture notes before the end of the day.
- Lab attendance is required.
- If you submit an assignment 45 minutes after the due date, it will not be considered late.
- Your instructor will give you a free lunch if you invite him to lunch.

Do not circle the bullet in front of any statement that incorrectly describes your instructor's course policies. Feel free to provide an explanation for your answer if you believe the statement to be ambiguous.

Not Graded: How much time do you plan to spend on this class outside of class?

Do you have that time scheduled on your calendar?

From what you have seen so far, do you have any suggestions for things that I could do better?

(a) Indicate what would be displayed by the following code snippet:

```
int i = 14;  
int j = 4;
```

```
JOptionPane.showMessageDialog(null, i + "/" + j + "=" + i/j);  
JOptionPane.showMessageDialog(null, i + "%%" + j + "=" + i%j);
```

(b) Write one line of Java code that, when placed after the code above, will display the following to the console. Your code may not make use of any numbers.

14 / 4 = 3.5

Perform a long form trace on the following Java program:

```
public class Quiz2 {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);

        System.out.print("Enter a couple of integers: ");
        int i = in.nextInt();
        int j = in.nextInt();

        System.out.println("Enter a color");
        String color = in.next();

        i = i + j;

        System.out.println("I have " + j + " " + color + " balls");
    }
}
```

Use the following for input:

3
5
rusted purply magenta

Line #	i	j	color	output

Complete the following code that asks the user to enter a name and then displays (on the console) the name vertically instead of horizontally. For example,

Input :	Output :
George	G
	e
	o
	r
	g
	e

```
public static void main(String[] args) {  
    Scanner in = new Scanner(System.in);  
    System.out.println("Please enter a name.");  
}
```

Complete the following code that asks the user to enter a word. If the word has an odd number of letters, the program must display (to the console) “winner” fifty times. If the word has an even number of letters, the program must display (to the console) “loser” one time.

```
public static void main(String[] args) {  
    Scanner in = new Scanner(System.in);  
    System.out.println("Please enter a word.");
```

Complete the following program. The program should generate 100 pairs of random numbers. Each pair should consist of two uniformly distributed random `double` values between 0.0 and 1.0. Whenever the pair of numbers differs by less than 0.001, the values should be displayed to in the console.

You may use the provided API reference for the `java.util.Random` class.

```
import java.util.Random;

public class Quiz4 {
    public static void main(String[] args) {
```

Complete the following program. The program should ask the user to enter an angle in degrees and then display the sine of the angle entered.

You may use the provided API reference for the `java.lang.Math` class.

```
import java.lang.Math;

public class Quiz4 {
    public static void main(String[] args) {
```

(a) Show what will be displayed by the following code:

```
System.out.printf("%2s_%8s\n", "word", "word");  
System.out.printf("%08d_%.2f\n", 8381, 3.577);
```

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4

(b) Write a printf statement that will display the value stored in `money` in dollars and cents. For example, if `money = 33.577`, your code should display: `$33.58`.

You may use the provided API reference for the `java.util.Random` class.

```
import java.util.Random;
```

```
public class Quiz5 {  
    public static void main(String[] args) {
```

In lecture we implemented a `Fraction` class that had two attributes: `num` and `den` (both `ints`). Implement an `add` method for the `Fraction` class that returns the sum of the calling object and the fraction passed to it. The calling object and fraction passed to it should not be changed as a result of calling the method.



In lecture we implemented a `Complex` class that had two object attributes: `real` and `imag` (both `doubles`) and a class attribute: `eeMode` (a `boolean`). Implement the `subtract` method for the `Complex` class that returns the difference of the calling object and the complex number passed to it. The calling object and complex number passed to it should not be changed as a result of calling the method.

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True/false

- _____ The top-down design methodology is good because it keeps everyone focused on a common goal.
- _____ The top-down design methodology is good because it avoids “reinventing the wheel.”
- _____ The top-down design methodology is good because it keeps management informed.
- _____ The top-down design methodology is good because it minimizes the chances of solving the wrong problem.

In a top-down design process, which do you decide on first — the classes or the `public` methods?

When should you use bottom-up design?

True/false

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