CS 302 Week 6

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Please form groups of 2 or 3
What is the answer?

String s1 = "A very important programming tool.";
String s2 = s1.substring( 13, 14);
String s4 = new String( "Pickup by garbage collector");
if ( s1.contains( "gram")) {
    s4 = s1.substring( 6, 8).trim();
}
char c3 = s1.charAt( s1.indexOf('g') -3);
String answer = (s2 + c3 + s4).toUpperCase();
Write code to print out as a grid

```c
int [][]grid = {{1, 2, 3}, {4, 5}, {7, 8, 9}};
```

```
1 2 3
4 5 6
7 8 9
```
Fix problems. What is message?

```java
final String END_OF_DATA = null;  //sentinel
String []list = {"An", "array", "has", "Strings", null, null};
String message = "";
for( String element : list)  //foreach loop
    if ( element != END_OF_DATA)
        message += element + " ";
System.out.println( "message: " + message);
```
if ( !(teamLabsAttended < 12 || codeLabCount < 150) ) {
    //what grade do you get?
}

!(teamLabsAttended < 12) && !(codeLabCount < 150)

teamLabsAttended >= 12 && codeLabCount >= 150
Are all Strings the same?

String []arr = new String[3];
arr[0] = "hello";
arr[1] = "hello";
arr[2] = new String("hello");
System.out.println( arr[1] == "hello" );
System.out.println( arr[1].equals( "hello" ));
System.out.println( arr[2] == arr[1] );
System.out.println( arr[2].equals(arr[1]) );
Trading Strings

String strMinsub = “Minsub’s string”;
String strBen = “Ben’s string”;

Minsub and Ben would like to trade strings. In other words, Minsub’s would become Ben’s and Ben’s would become Minsub’s. How do they do it?
What are values of x, y and z?

```java
public static void main(String []args) {
    int x = 5, y = 10, z = 15;
    z = swap( x, y);
    System.out.println( "x=" + x + " y=" + y + " z=" + z);
}

public static int swap( int y, int x) {
    x = 1;
    int z = 1;
    return x + y + z ;
}
```
boolean x = false; int y = 5;
if ( x) {
    System.out.println("x is true");
} else if ( y < 5) {
    System.out.println("y < 5");
} else if ( y == 5) {
    System.out.println("y == 5");
} else {
    System.out.println("y > 5");
}
Which will compiler allow?

static int find( char ch, int num, double d) {
}

int result = find( ‘a’, 10.5, 3.14);
char result = find( ‘a’, (int)10.5, ‘z’);
int result = find( 6, 2, 15);
boolean done = find( (char)6, -1001, 3.9) >= 0;
Is it a leap year?

A year is a leap year if it is divisible by 4 but not by 100, or if it is divisible by 400.

Write the code:
Arrays

- fixed number of same data type (contiguous in memory)
- What would we like to do with arrays?
Arrays

Professional Source Code

Javadoc

Methods (static vs non-static)
import java.util.ArrayList;
public class MyClass {
    public static void main( String []args) {
        ArrayList<String> cityList = new ArrayList<>();
        cityList.add( "Denver");
        cityList.add("Madison");
        System.out.println( "Empty:" + cityList.isEmpty());
        System.out.println( "Size: " + cityList.size());
        System.out.println( "toString: " + cityList.toString());
    }
}