Almost done with PSA2?

Get ready for PSA3!

Lots of practice with data and variables

The **Arrays** class

Creating simple GUIs

Exam 1: What to expect? (Hint: don’t panic)

New seats Monday (before exam): Watch Piazza for more info
Exam 1: Monday, April 15 (in class)

- Will be short: about 1 page (front and back) and 20 minutes
- Questions similar to clicker questions, worksheets, and reading quiz
- Covers material through this Friday (emphasis on PSA 1 and 2 topics)
- We’ll provide you with a list of methods (similar to green boxes in the book)
- Best way to study: *redo* clicker questions, worksheets and PSAs.
1. What are the three groups that the GUI API classes can be classified into?

A. Component classes, container classes, helper classes

B. Component classes, GUI classes, helper classes

C. Graphics classes, GUI classes, helper classes

D. Graphics classes, container classes, helper classes

E. Graphics classes, container classes, Swing classes
2. What is the difference between a Container class and a Component class?

A. A Container class is an Object, but a Component class is not.

B. A Container class is a special type of Component that can hold instances of other Component classes.

C. A Component class is a special type of Container that can hold instances of other Container classes.

D. Nothing. They are exactly the same.
3. What feature of JFrames can you use to arrange all of a frame’s Java GUI components without having to hardcode the component locations?

A. There is no feature for this – you must hardcode everything.

B. A JFrame method called arrangeAll().

C. The JFrame’s getter and setter methods.

D. One of the three basic layout managers: FlowLayout, GridLayout, and BorderLayout.
char ch = 'B';
int bInt = (int)ch;
char ch2 = ch;
ch2 = 'A';

At the end of these statements, what is the value of ch?
A. ‘A’
B. ‘B’
C. 65
D. 66
E. I don’t know

At the end of these statements, what is the value of ch2?
A. ‘A’
B. ‘B’
C. 65
D. 66
E. I don’t know
String s1 = "Strings are immutable.";
String s2 = s1.concat(" Really, it’s true.");
s1 = s2.concat(" But sometimes they change.");
System.out.println( s1 );

What does the above code print?
A. “Strings are immutable.”
B. “Strings are immutable. Really, it’s true.”
C. “Strings are immutable. Really, it’s true. But sometimes they change.”
D. “Really, it’s true. But sometimes they change.”
E. I don’t know
String s1 = "Strings are immutable.";
String s2 = s1.concat(" Really, it’s true.");
s1 = s2.concat(" But sometimes they change.");
System.out.println( s1 );
Passing (and modifying) data

public boolean anyGreaterThanN(int[] myArray, int num) {
    for (int i = 0; i < myArray.length; i++) {
        if (myArray[i] > num) {
            myArray[i] = 1;
            return true;
        }
    }
    return false;
}

public static void main(String[] args) {
    ArrayPlay ap = new ArrayPlay();
    int[] myA = {2, 4, 6, 3, 15};
    ap.anyGreaterThanN(myA, 5);
}

What is the value of myA at the end of main?
As you reach each variable, make a box for it
If the variable holds a primitive, but the value in the box
if the variable holds an object (or an array) put an arrow in the box
Parameters are always passed BY VALUE (by COPYING WHAT’S IN THE BOX)
public boolean anyGreaterThanN(int[] myArray, int num) {
    for (int x : myArray) {
        if (x > num) {
            myArray = new int[5];
            for (int i = 0; i < 5; i++)
                myArray[i] = 1;
            return true;
        }
    }
    return false;
}

public static void main(String[] args) {
    ArrayPlay ap = new ArrayPlay();
    int[] myA = {2, 4, 6, 3, 15};
    ap.anyGreaterThanN(myA, 5);
}

What is the value of myA at the end of main?