ComSci 100 Students:
As you arrive and get ready for class, please get out your computers, open Eclipse and snarf the materials we’ll be using in today’s lecture.

How to snarf:
1. Open up eclipse
2. In the menu, go to Ambient->Download (snarf) a project
3. Down at the bottom of the eclipse window, the “Snarfer Site Browser” will open
4. Add this class to your list of project sites, if you haven’t already. Do this by clicking the icon that looks like
5. Then type: http://www.cs.duke.edu/courses/cps100/fall11/snarf/snarf.xml into the url window
6. Open the “CompSci 100, Fall 2011” folder, open “recitation”, double click on 100fall11_recitation1, and click Install
7. Once you snarf sucessfully, open up the file called “WorstCodeInTheWorld.java” and see if you can follow the instructions there.

If you forgot your computer or did not install eclipse, please sit with someone who did if you had trouble installing eclipse, or have trouble snarfing, please raise your hand (at least before class starts) and someone will come and help you.

My goal today:
Getting you 100% ready to leap screaming into your assignments

What you will do today
1. You will code a solution to Circles Country one of this week’s APTs
2. You will develop a ‘structure’ of the solution to Hangman Part 2
3. You will debug the Worst Code in the World (if we have time)

How many folks have got Eclipse?
A. I have a eclipse, it’s here in class, and I am ready to rock! (guitar riff)
B. I installed Eclipse, I was ready to rock…and then I left my laptop at home.
C. I tried to install eclipse, but I ran into some problem that I couldn’t resolve.
D. I forgot, my computer exploded, I had a highly important World of Warcraft raid, turns out I’m allergic to Java programming, I was attacked by ninjas, I did not install Eclipse in this timeline…but if you consider the multiple universe interpretation of quantum mechanics perhaps it is merely you who chose to perceive I did not install Eclipse, etc.
Is \((x_1, y_1)\) within the circle \(x_2, y_2, r\)?

What to do

- Write the function `isInside` for `CirclesCountry.java`
- Test your solution
- Feel free to talk to your neighbors...in fact follow the Left Right rule
- Recall that the formula for distance between two points is 
  \[ \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \]
- If you finish, go ahead and write the rest of the code in `leastBorders`
What you will do today

1. You will code a solution to Circles Country one of this week’s APTs. Done! And wasn’t it a neat solution?
2. You will develop a ‘structure’ of the solution to Hangman Part 2
3. You will debug the Worst Code in the World (if we have time)

The Numeric “C-style” for loop

```java
for(int i = 0; i < 20; i++)
{
    //do something
    //but never modify i
}
```

Just to make sure you’ve got it

```java
int i = 9;
for(i = 6; i > 3; i = i - 2)
{
    //do stuff
}
```

A. 1  
B. 2  
C. 3  
D. A different number

After your hangman code reads in the number of guesses and the size of the word, you’ll need to enter some sort of loop to let the user repeatedly guess letters. That loop should be:

1. A for loop, because you’ll need to know how many times each letters are guessed
2. A for each loop, because you’ll need to loop once for each character of the solution
3. A while loop, because depending on if the user guesses letters correctly you might need to loop a different number of times
4. A while loop, because the length of your word varies
5. A while loop, because otherwise you would need global variables
What to do

• Modify the hangman code to only look at the first character of the user’s input
• Write some code (could be a function) that determines if the first character of input is in the secret word (in any position)
• You’ll need to use the numeric form of the for loop (there’s an example right in the code you’re editing) and the string function charAt(int). That is myString.charAt(5) returns the 6th character of the string
• If you have time, switch that for loop over to a while loop

Immutable Strings

String myString = “12345”;
// way 1
myString = myString.substring(0, 2) + ‘q’ +
myString.substring(3);
// way 2
char[] myStringAsArray =myString.toCharArray();
myStringAsArray[2] = ‘z’;
myString = new String(myStringAsArray);

What you will do today

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You Are Ready*

1. You’ve coded up one of the trickier APTs this week
2. You’ve got a general structure for Hangman Part 2
3. You’re familiar with some common errors and what they look like (assuming we had time)

* If you don’t feel 100% ready...or if you have trouble don’t hesitate to get help!