

Welcome to ICS 111 Lab

Section 3 and 4

Week 6

****Read through HW5 Assignment****
****OPEN IDE****

Tuesday Outline

- Setup [Circles.java](#)
- Methods
- Nested for loops
- HW5 Review
 - Circles.java - **draw()**
- Breakout Groups

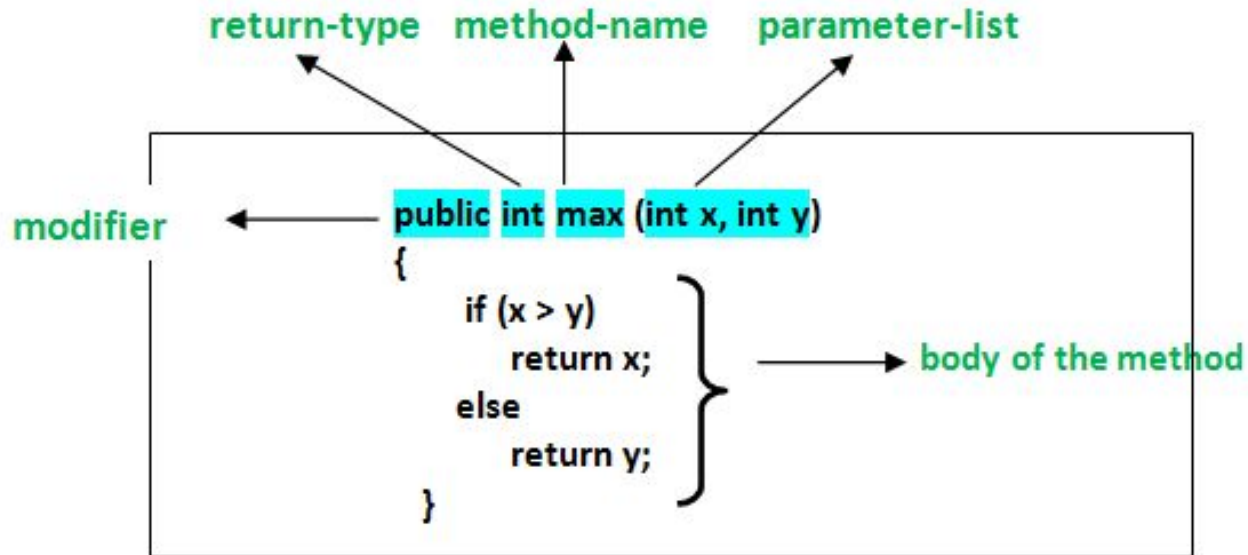
Setup: Circles.java

- Create new JAVA class called “Circles.java”
- Copy code from page(s) 180 -181 from [textbook](#)
 - Or Copy/Paste [code](#)
- Run in IDE

Methods

- A **method in Java** or Java Method is a collection of statements that perform some specific task and return the result to the caller. A Java method can perform some specific task without returning anything.
- Methods in Java allow us to **reuse** the code without retyping the code.
- Method Components
 - **Modifier:** defines access type (ie. **public**)
 - *Static:* for [static methods](#) keyword is **static**
 - **Return type:** value returned by method (ie. **int**) or **void** if method does not return anything
 - **Method name:** always lowercase or [camel case](#) for compound words
 - **Parameter list:** inputs to the method or empty parentheses () if no inputs
 - **Method body:** code to be executed
- NOTE: Methods you implement should have proper comments (documentation)

Method Syntax:



Nested For-loops:

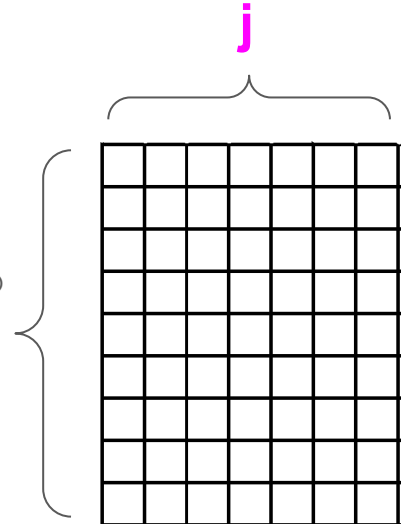
- Loop within a loop
- Single for loop can iterate through one dimension:

```
for(int i=0;i<length;i++){}
```



- Nested for loop can iterate through two dimensions:

```
for(int i=0;i<length;i++){//outer loop
    for(int j=0;j<length;j++){ //inner loop
    }
}
```



Week 6: Resources

- HW 5:
<http://www2.hawaii.edu/~esb/2022spring.ics111/hw05.html>
- Textbook PDF:
<http://bedford-computing.co.uk/learning/wp-content/uploads/2015/09/Java-for-Everyone-Late-Objects.pdf>
- Method Resources:
 - Methods: <https://www.geeksforgeeks.org/methods-in-java/>
 - Methods Documentation Guide:
<https://www.oracle.com/technical-resources/articles/java/javadoc-tool.html>
 - Static Methods: <https://www.geeksforgeeks.org/static-methods-vs-instance-methods-java/>
 - Style/ Naming Conventions: <https://www.geeksforgeeks.org/java-naming-conventions/>