

The following questions are based off the goals for M02 L05 discussing Predefined Classes, Objects and Methods and I/O:

Goals:

- *Standard Library Packages, Classes and Methods*
 - *Find and use documentation (API) in Eclipse for the core libraries*
 - *Explain*
 - *predefined classes, objects and methods*
 - *methods, parameters, arguments*
 - *Identify packages, classes and methods in code and apply in code*
 - *Explain and develop code that constructs objects and calls their methods to perform operations.*
- *Standard Input and Output (I/O) Input/Output*
 - *Describe standard input and output streams*
 - *Create code to display information to the console and format output and read information from the keyboard*
- *Quality Code*
 - *Use your IDE to debug and clean up warnings*

Note: Feel free to continue exploring these goals and the lecture in a way that *makes sense to you*.



1. What are naming conventions for a class name? (*Hint*: think class versus a variable? How can we tell its *specifically* a class name?)
2. How do you create a scanner object called input (*Hint*: Check lecture for example)
 - a. In Eclipse, after creating the object, start a new line by typing "[input.ne](#)". Explore the API that comes up
3. How do I take in a String input from a user using my new scanner object? (*Hint*: Use the api explored in question 2).
 - a. How would I take in a Double input?
 - b. How would I take in an Int input?
4. Notice the API below that I accessed for a String labeled dogName.

The screenshot shows the Eclipse IDE with a code snippet:


```
String dogName = "Jalapena";
dogName.ch
```

 A Javadoc popup is displayed for the `charAt` method of the `String` class. The popup lists several methods: `charAt(int index)`, `chars()`, `getChars()`, `matches()`, `regionMatches()`, and `toCharArray()`. The `charAt(int index)` method is highlighted. The Javadoc for `charAt` states: "Returns the char value at the specified index. An index ranges from 0 to length() - 1. The first char value of the sequence is at index 0, the next at index 1, and so on, as for array indexing. If the char value specified by the index is a surrogate, the surrogate value is returned." It also specifies that the method is specified by `charAt(...)` in `CharSequence`, has one parameter `index` (the index of the char value), returns the char value at the specified index, and throws `IndexOutOfBoundsException` if the index is negative or not within the bounds of the string.

- a. What is the method highlighted?
 - b. What are the parameters? How do you know?
 - c. Specify a valid argument I can pass into the method
5. The print statement below has an error because it is missing something.

The screenshot shows a code snippet in Eclipse:


```
38
39 print(Dogname + "is cute");
40
```

 There is a red squiggly line under the variable `Dogname`, indicating an error.

- a. What is it missing? What is the significance of that missing code? (*Hint*: visit slides about I/O)

The screenshot shows a code snippet in Eclipse:


```
23 Scanner input = new Scanner();
```

 There is a red squiggly line under the `new Scanner()` expression, indicating an error.

- b. The creation of the Scanner object above doesn't work because it's missing something. What is it missing? What is the significance of that missing code?
6. Using **printf()** and the variable `dogName` from above, how can I print "Jalapena is cute" in the console?
 7. Attempt the BodyMassIndexActivity.java Lab from your class examples