



Welcome to

LC101



WHO AM I?



JOE COWSERT

- LC101 Graduate (2017)
- Former LC Apprentice (NIPR)
- LC Teaching Assistant (2017 - 2020)
- Software Engineer (MSTS)
- Gamer/Streamer
- Husband
- Father
- TA Most Likely to Brighten Up A Students Day (LC101 2019/2020)



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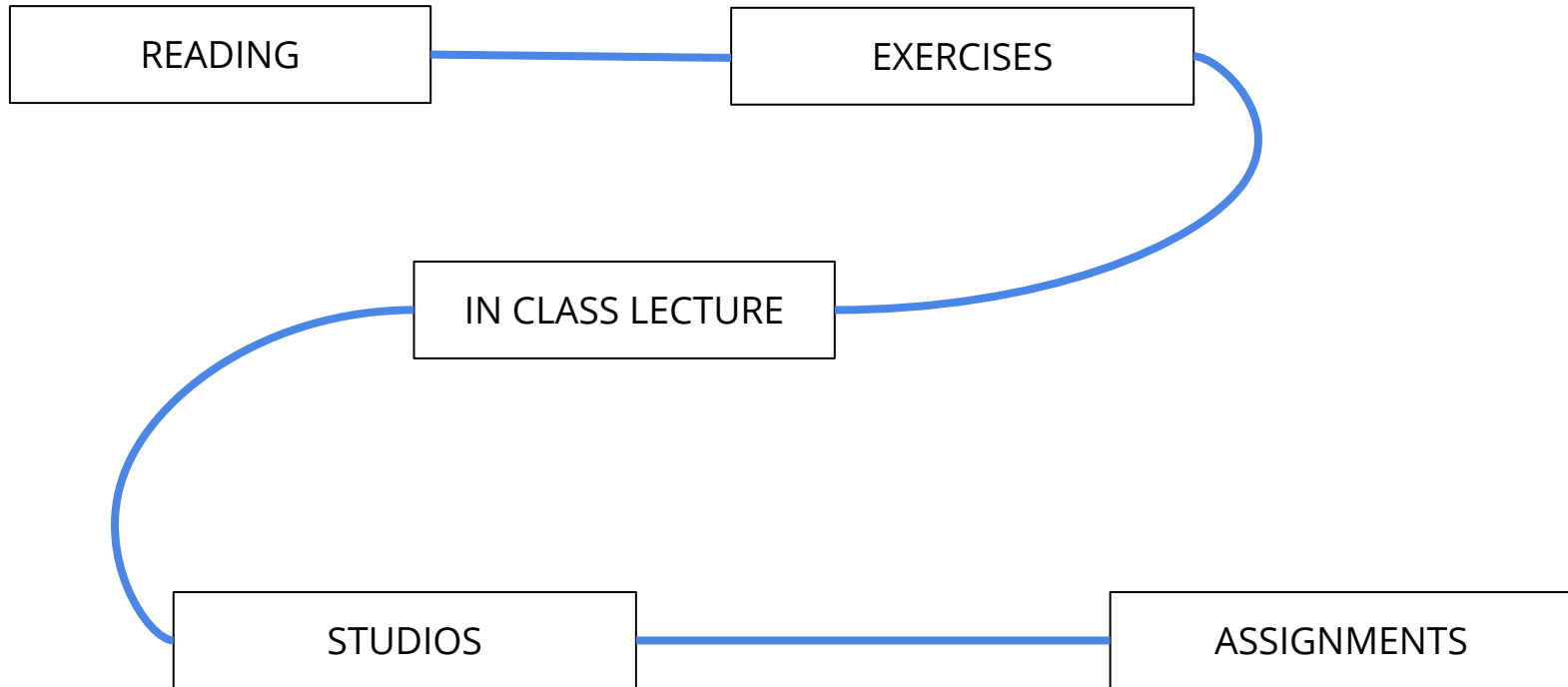
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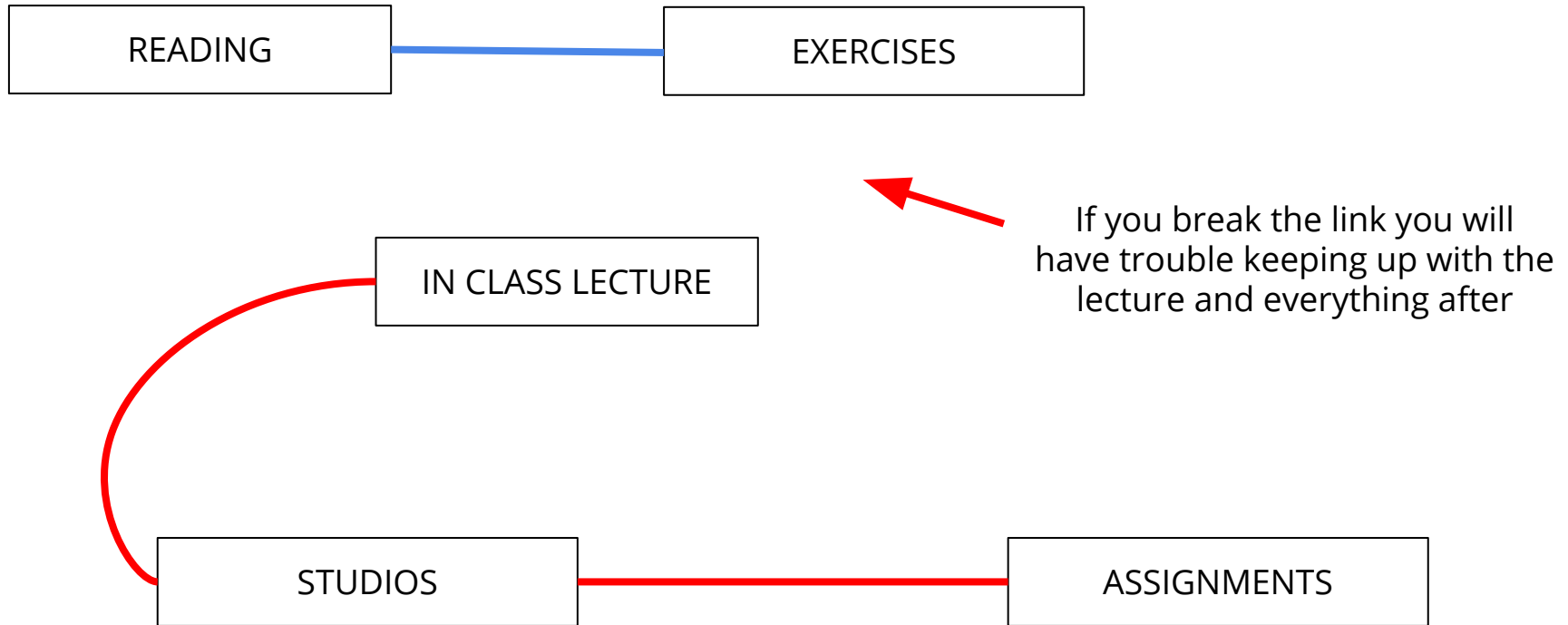
What should you expect?



MAP OF LEARNING



MAP OF LEARNING



What I will go over

- Chapter Overview
- Parts of the chapter that could be confusing
- Parts of the chapter that I feel that should be emphasized
- Questions you have about the chapter
- Questions you have in general

ASK QUESTIONS!

What I won't go over

- Everything in the chapter. You are supposed to read it!
- That's it, That's the list.





LC101 - UNIT 1

Chapter 4 - Data and Variables



CHAPTER RECAP

- Value - specific piece of data - 4.1
 - Each value has a data type (ex. Number, String, etc)
- Strings can be enclosed in either single (') or double (") quotations - 4.1
- Quotations can be nested inside each other. Double inside single or Single inside double. - 4.1
- You can use typeof to determine the values type. - 4.1
- Type conversions (Number and String functions) 4.2
 - You can't convert a string of alpha characters to a number. It will give NaN or not a number.

4.3 - 4.4 VARIABLES

USING VAR vs LET

While `var` is valid javascript syntax but should not be used to declare a variable. While it still technically works, there are a few important ways that it differs from `let` that we will learn about later.

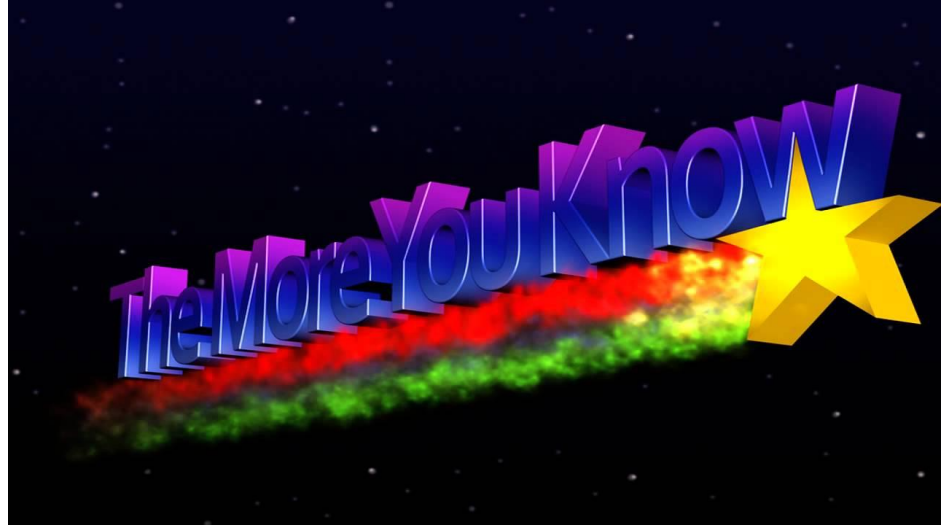


= is an assignment

VARIABLE IS ASSIGNED VALUE

=== is equality

VARIABLE EQUALS VALUE *



* more on this later

DECLARING VARIABLE

INITIALIZING VARIABLE

RE-ASSIGNING VARIABLE



```
let masonJar
```



```
masonJar = "raspberry jam";
```



```
masonJar = 25;
```

Once variables have been created they can be used later in the program anywhere that value can be used.



```
const masonJar = 'jalapenos'
```

Imagine that this mason jar lid has been glued shut and can't be opened.

That is what const does in Javascript. Once it is set it can't be reassigned or change value.

If you try to do it you will get this nice error message!

```
TypeError: Assignment to constant variable.
```

Variable naming

- Descriptive
- Provide context to the data they contain
- Provide context on how the data will be used

Examples:

- `areaOfCircle`
- `radiusOfCircle`
- `speedOfCar`

NAMING CONVENTIONS



CASE

camelCase

With Camel case we want to start with lowercase and capitalize each internal word.

Note: different languages often have different naming conventions

4.5, 4.6 , 4.7

*EXPRESSIONS AND OPERATIONS AND
OTHER OPERATORS OH MY!*

EXPRESSIONS and EVALUATION

An **expression** is a combination of values, variables, operators, and calls to functions. An expression can be thought of as a formula that is made up of multiple pieces.

The *evaluation* of an expression produces a value, known as the **return value**. We say that an expression **returns** a value.

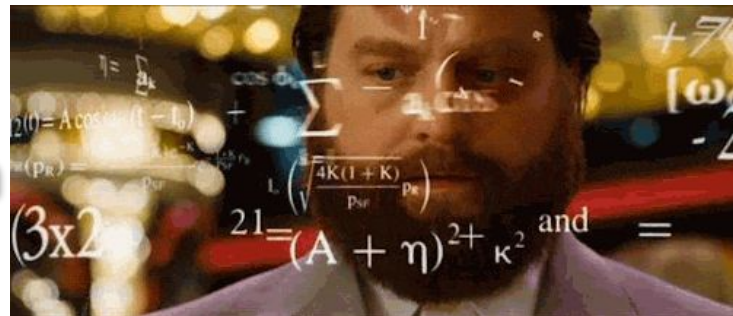
OPERATORS AND OPERANDS

The ones you know:



The ones may not know:

% modulus
****** exponentiation
++ increment
-- decrement



Always remember **PEMDAS** (parentheses, exponents, multiplication, division, addition, subtraction)

MODULUS OPERATOR

Computes the remainder after division of one number by another.
We write it with the % sign.

$$2 \% 2 = ?$$

Answer = 0

$$5 \% 3 = ?$$

Answer = 2

$$10 \% 7 = ?$$

Answer = 3



* One of the main uses is to see if a variable is odd or even.

4.8 Using readline-sync

```
1 | const input = require('readline-sync');  
2 |  
3 | let info = input.question("Question text... ");
```

NOTES: You can use your input on different variables. Just remember that all inputs are treated as a string! Don't forget your Number() and String() functions!



QUESTIONS?



STUDIO TIME!!!!



Work together! Helping each other with help cement your knowledge of the course material

If you have any other questions you can slack me and I will do my best to answer them!