- Codergirl – WebDev Unit
  - Class 1
  - March 3, 2021

Agenda

Agenda

- Intros
- Course Overview
- Review
- Live coding
- Studio

Instructor Intros

Chetna Aggarwal
MS Computer Engineering
Missouri University of S&T - Rolla

Bayer
- Developer
- Technical Lead
- Agile Coach

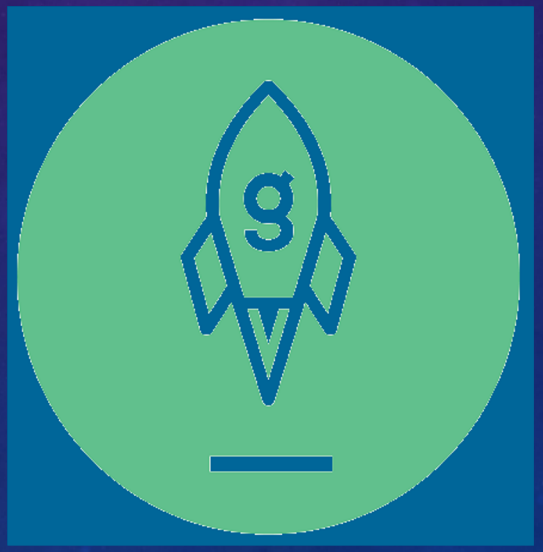
Launchcode journey

Fun facts:
- Strengths
- Developing others
- Valuing individuals
- Treating people consistently

Mentor Intros

- Lucas
- Katie
- Tyler
- Veleria
- Sunita
- Zach
- Sam
- Ted
-

- Brit
- Mary
- Emma
- Sidney
- Pallavi
- Olivia
- Carrie



Course Overview

- Every Wednesday
- 5:30-8:30pm
- Last class day for Unit 1: July 7th.
- Virtual

- Pass/Don't pass
- Must complete all graded assignments
- Passing allows moving to Unit 2

Course Tools

- Canvas
- Prep work, Assignments and grades
- Prep work posted roughly 2 weeks out

- Slack
- Best communication method
- Announcements
- Don't be fooled by a green dot

- repl.it
- Online Integrated Development Environment (IDE)
- Write your code here!

Course Expectations

- You
- Do the prep work *before* class
- Come to class (virtually)
- Ask questions and participate
- Do the studios and assignments
- Don't cheat

- Mentor Team
- Be available (within reason)
- Be patient and understanding
- Be prepared

Survival Tips

- Find or form a study group
- #study-groups

- Create a study schedule and stick to it
- Plan on 15-20 hours per week

- Reach out when you're struggling
- Classmates, mentors, LC staff
- If something is unclear, ask

- Stay focused on your goals
- Why are you here? Let that fuel you

Academic Honesty

Class Overview

Questions?

Review – Values and Data Types

- Programs are made of two things:

1) Data
2) Operations that manipulate data

Review – Values and Data Types

- **Value:** Specific piece of data
  - "Hello world" **String**
  - 23 **Number**
  - animal_cross.jpeg **Object**
  - true **Boolean**

- **Data Type**: Category of data

Review – Values and Data Types

- **Variable:** Way to store values for use in a program.
  - **Declaration**: Creating a new variable

```
let programmingLanguage;
```

  - **Initialization:** Giving the variable a value to store

```
let programmingLanguage;
programmingLanguage = "JavaScript";
```

```
let programmingLanguage = "JavaScript";
```

Review – Values and Data Types

- Variable keywords
  - **let** – used if the value will change
  - **const** – used if the value is constant
- Trying to change a **const** variable will lead to errors
  - Only use keywords when **declaring** a variable, never for reassignment
  - Do not use **var**

Review – Values and Data Types

```
let day = "Thursday";
console.log(day);

day = "Friday";
console.log(day);

day = 21;
console.log(day);
```

Declaration and Initialization

Reassignment

Reassignment

Review – Values and Data Types

- Variable Naming
  - Use camelCase
    - thisIsVeryCoolCamelCase
    - this_is_not_camel_case
- No special characters or whitespace
- Cannot start with a number
- Use meaningful names
  - x = “Hello, World!” (BAD)
  - greeting = “Hello, World!” (GOOD!)

Review – Values and Data Types

- **Operator:** Character that represents a computation to be made
- You likely know: +, -, *, /
- ** is exponent (5 ** 2 = 25)
- ++ is increment (if x = 2, x++ = 3)
- % is modulus
  - Divide two numbers, return the remainder
  - 7 % 2 = 1

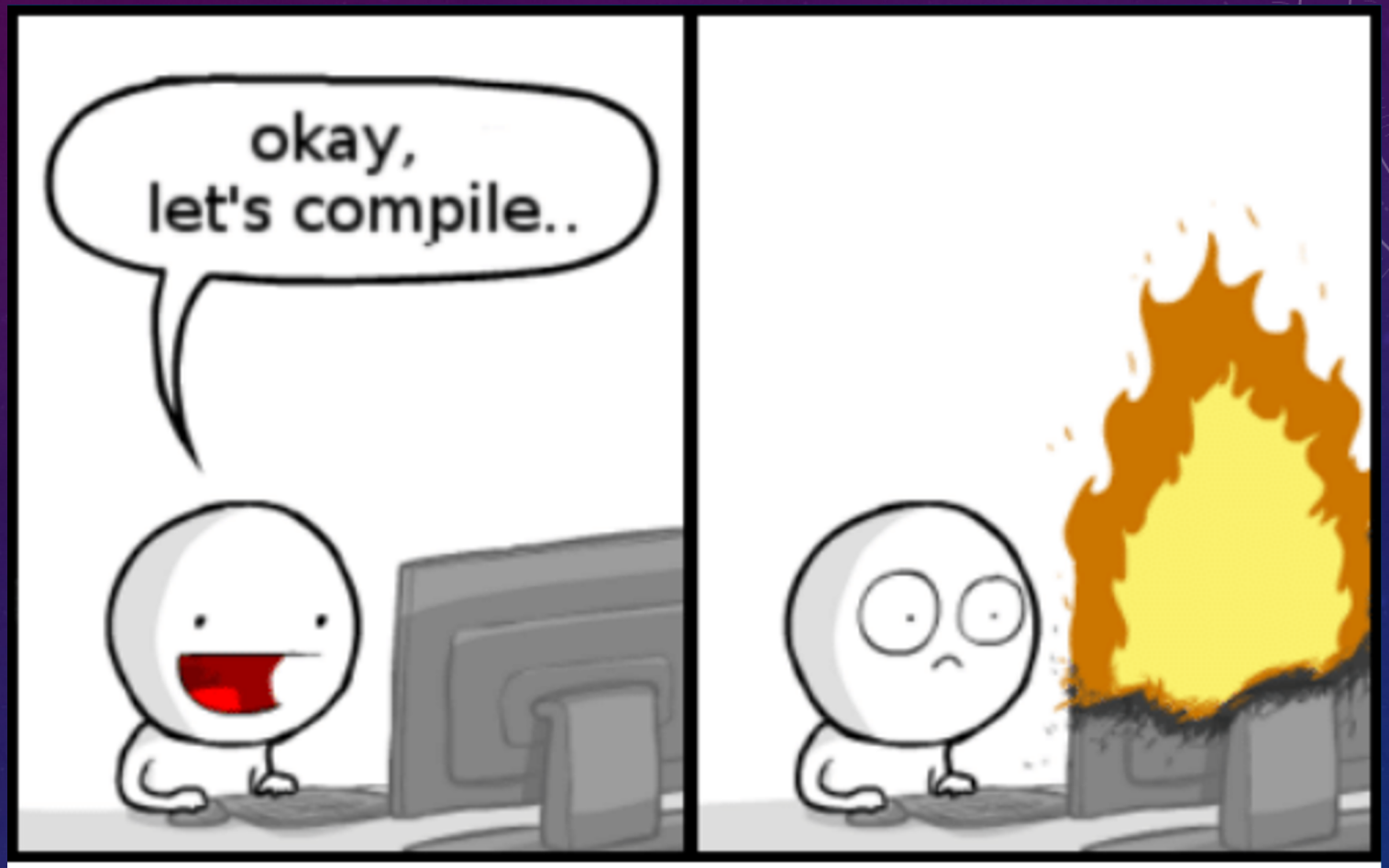
Arithmetic operators

Operator	Description	Example
Addition (+)	Adds the two operands	`2 + 3` returns `5`
Subtraction (-)	Subtracts the two operands	`2 - 3` returns `-1`
Multiplication (*)	Multiplies the two operands	`2 * 3` returns `6`
Division (/)	Divides the first operand by the second	`6 / 2` returns `3`
Modulus (%)	Aka the remainder operator. Returns the integer remainder of dividing the two operands.	`7 % 5` returns `2`
Exponentiation (**)	Calculates the base (first operand) to the exponent (second operand) power, that is, $base^{exponent}$	`3 ** 2` returns `9` `5 ** -1` returns `0.2`
Increment (++)	Adds one to its operand. If used before the operand (`++x`), returns the value of its operand after adding one; if used after the operand (`x++`), returns the value of its operand before adding one.	If `x` is `2`, then `++x` sets `x` to `3` and returns `3`, whereas `x++` returns `2` and, only then, sets `x` to `3`
Decrement (--)	Subtracts one from its operand. The return value is analogous to that for the increment operator.	If `x` is `2`, then `--x` sets `x` to `1` and returns `1`, whereas `x--` returns `2` and, only then, sets `x` to `1`

Review – Values and Data Types

Questions?

Live Coding

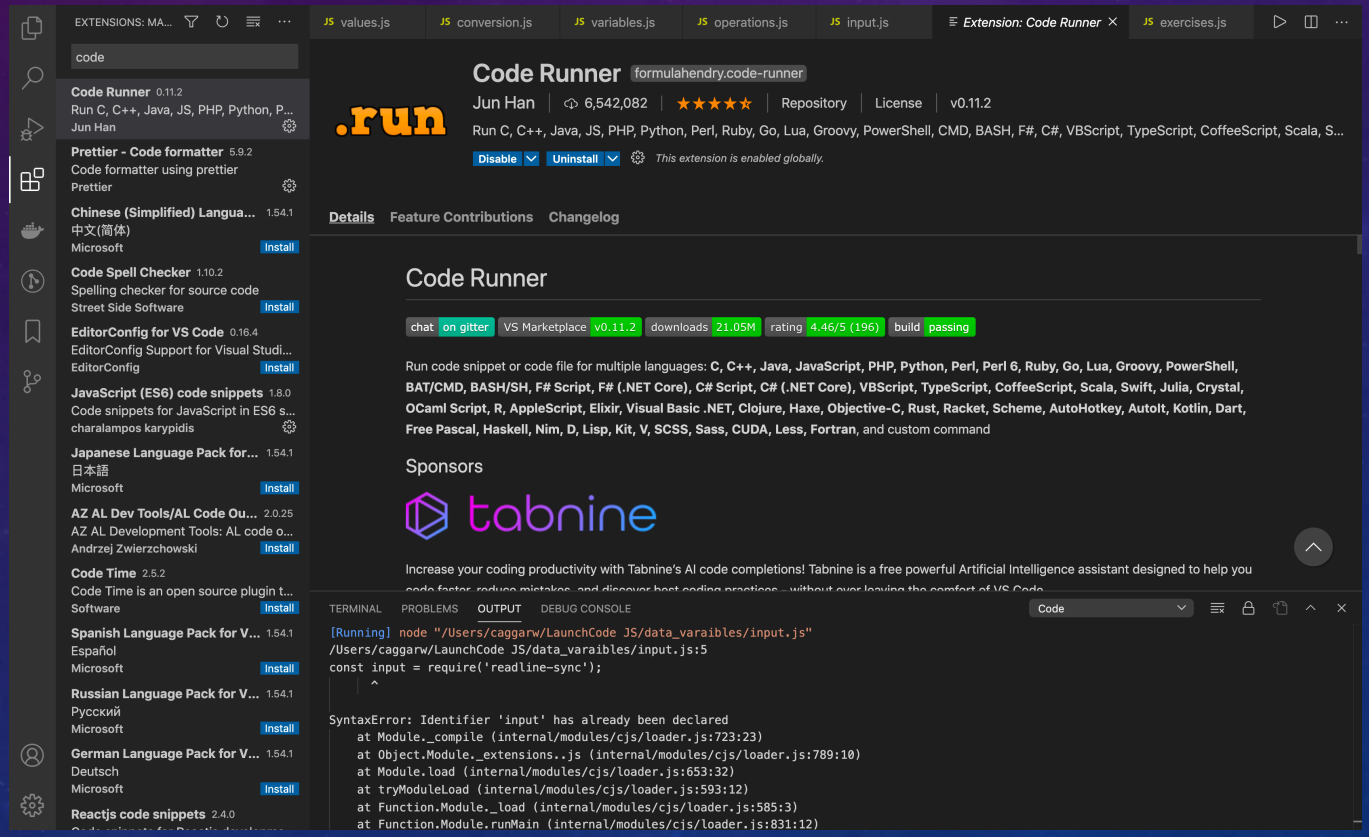


learning a new programming language..

Live Coding

- **VS Code**

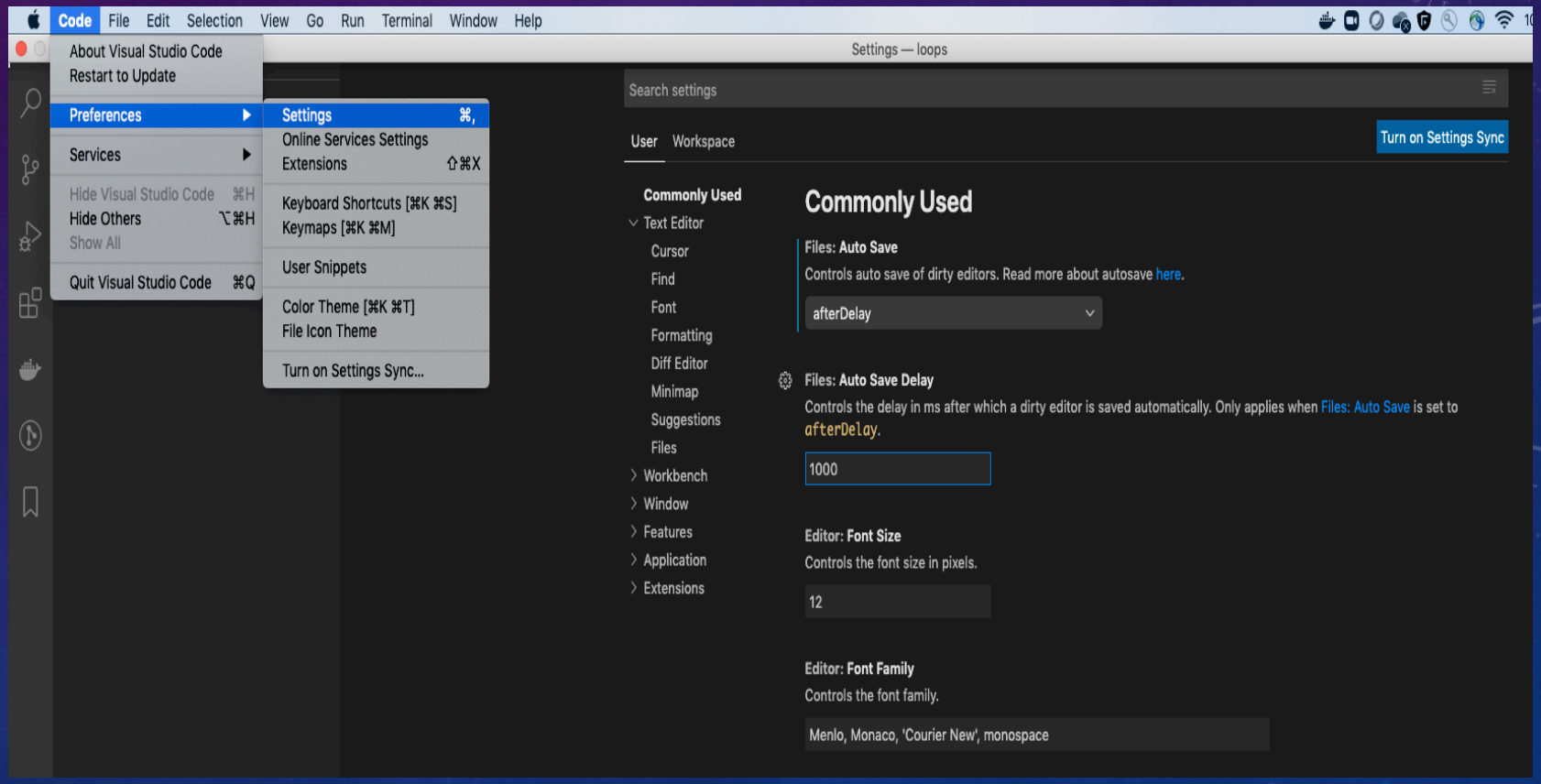
- https://code.visualstudio.com/download



Live Coding

- **VS Code - npm i --save readline-sync**

- https://code.visualstudio.com/download



Live Coding

- typeof
- console.log
- type conversion
- Variables - creating, reassigning
- let, const
- naming
- Expressions
- Operations, compound assignments, reading input

Studio – Data and Variables

- Store data in variables
- Print data back to the user
- Format the output to look like the LC04 Form

```
----------------------------------
> LC04 - LAUNCH CHECKLIST
----------------------------------
Date: Monday 2019-03-18
Time: 10:05:34 AM

----------------------------------
> ASTRONAUT INFO
----------------------------------
* count: 7
* status: ready

----------------------------------
> FUEL DATA
----------------------------------
* Fuel temp celsius: -225 C
* Fuel level: 100%

----------------------------------
> MASS DATA
----------------------------------
* Crew mass: 564.9 kg
* Fuel mass: 760000 kg
* Shuttle mass: 74842.31 kg
* Total mass: 835407.21 kg
```

Now

- Find your group Zoom
  - Intros
  - Studio
  - Prep for next week
- Studio Review
  - next week