

Coding Fundamentals ASPIRE

[8/11 - 12/12]

Helix Charter High School

Isabelle Viraldo

Week 2 [8/18 + 8/22]

Welcome!

- Mondays: Discussion + Activity
- Fridays: Review + Programming Exercise

What do you want to learn?

What do you care about?

What do you want to accomplish?

feedback!



Week 2 [8/18 + 8/22]

Topics I hope to cover:

- GitHub (How to use and let's set one up!)
- AI (Machine Learning vs Generative AI vs Image Detection, let's break it down (and make one of our own))
- How to code! (Some practical skills, and also best practices)
- Binary (What is it? Why is it important? Who cares?)
- Robotics (What do you need to get a robot working?)
- How does your computer work? (What do computers do when you're not looking?)
- What do you want to learn?

Week 2 [8/18 + 8/22]

Quick About Me! (Why should you trust anything I have to say?)

Helix High School >> Grossmont College >> San Diego State University

If you made a project, how would you save it?

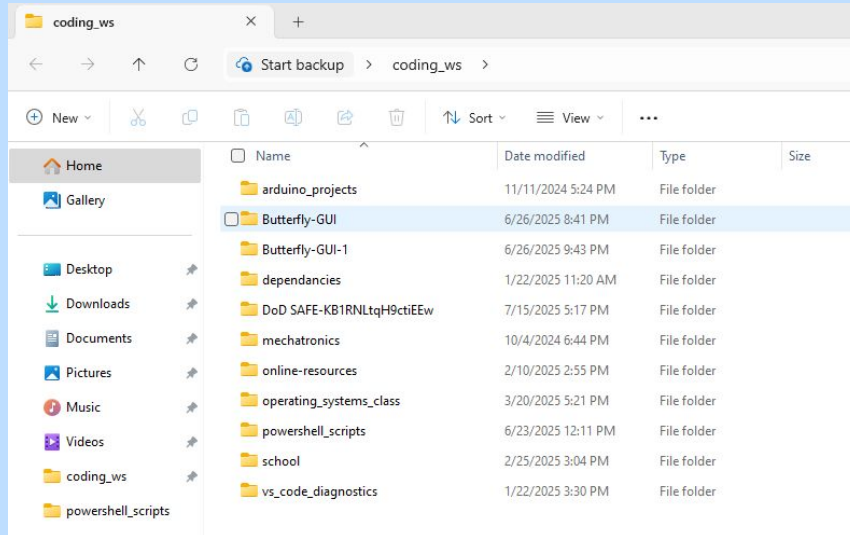
What is GitHub?

feedback!



Week 2 [8/18 + 8/22]

If you made a project, how would you save it?



Fwd: MAKE SURE TO DOWNLOAD FAST LED LIBRARY TO LAPTOP Inbox x

Isabelle Viraldo <isabelleviraldo@gmail.com>
to me ▾

Wed, Jun 22, 2022, 7:37 PM ★

#include <FastLED.h>

```
#define LED_PIN 3
#define NUM_LEDS 150
```

```
const int buttonPIN = 7; //pin for button
boolean on = false;
```

```
CRGB leds[NUM_LEDS];
```

```
void setup() {
```

```
    FastLED.addLeds<WS2812, LED_PIN, GRB>(leds, NUM_LEDS);
```

```
    pinMode(buttonPIN, INPUT_PULLUP);
```

```
}
```

```
void loop() {
```

```
    if (digitalRead(buttonPIN)){
```

```
        delay(200);
```

```
        //red
```

```
        if (!on){
```

```
            cycleColors(255,0,0);
```

```
        }
```

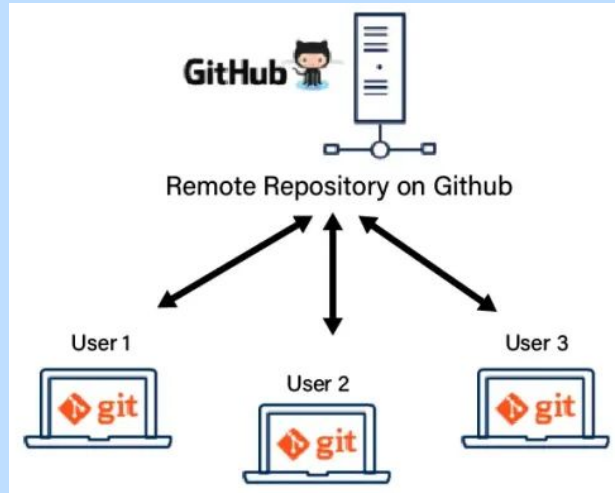
```
        delay(200);
```

```
        //yellow
```

Week 2 [8/18 + 8/22]

What is GitHub?

- Version history
- Backups in the cloud
- Collaboration
- Public visibility - build your portfolio
- Codespaces



Week 2 [8/18 + 8/22]

Let's take a look at our Coding Fundamentals ASPIRE GitHub!

rb.gy/8qgggc9

Let's look at the README file!

feedback!



Week 2 [8/18 + 8/22]

What are loops?

Repetitive tasks in the real world - cooking, cleaning, school

Automating this with loops

- Counting up or down
- Going through a collection
- Going until some event

In programming, you never want to write the same thing twice

Week 2 [8/18 + 8/22]

Shopping Cart Simulator!

Library Management Simulator!

rb.gy/8qgggc9

feedback!



