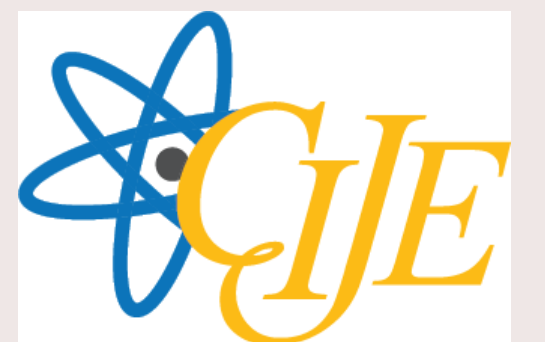# GitHub Collaboration

Jay Smallwood, Ph.D.
CIJE, Director of Research and Development
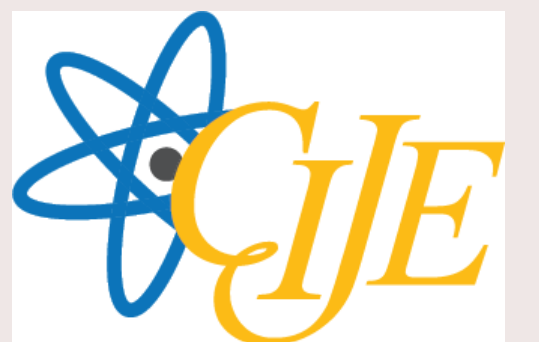
Audience and Goals

Audience and Goals

- This PD is for absolute beginners new to GitHub

- If you are an experienced GitHub user, you will likely not gain much

- Goals:

  - Understand purpose of GitHub

  - Create a new account

  - Walk through Hello World tutorial

  - Collaborate on editing an Arduino program (if time)

Why GitHub?

Why?

- GitHub it an online document collaboration platform that allows for easy code sharing and remote collaboration for any size group.

- It allows for easy tracking of changes, even in complex software with hundreds (or more) of collaborators.

- It is a **required** skill at any technology firm in the world.
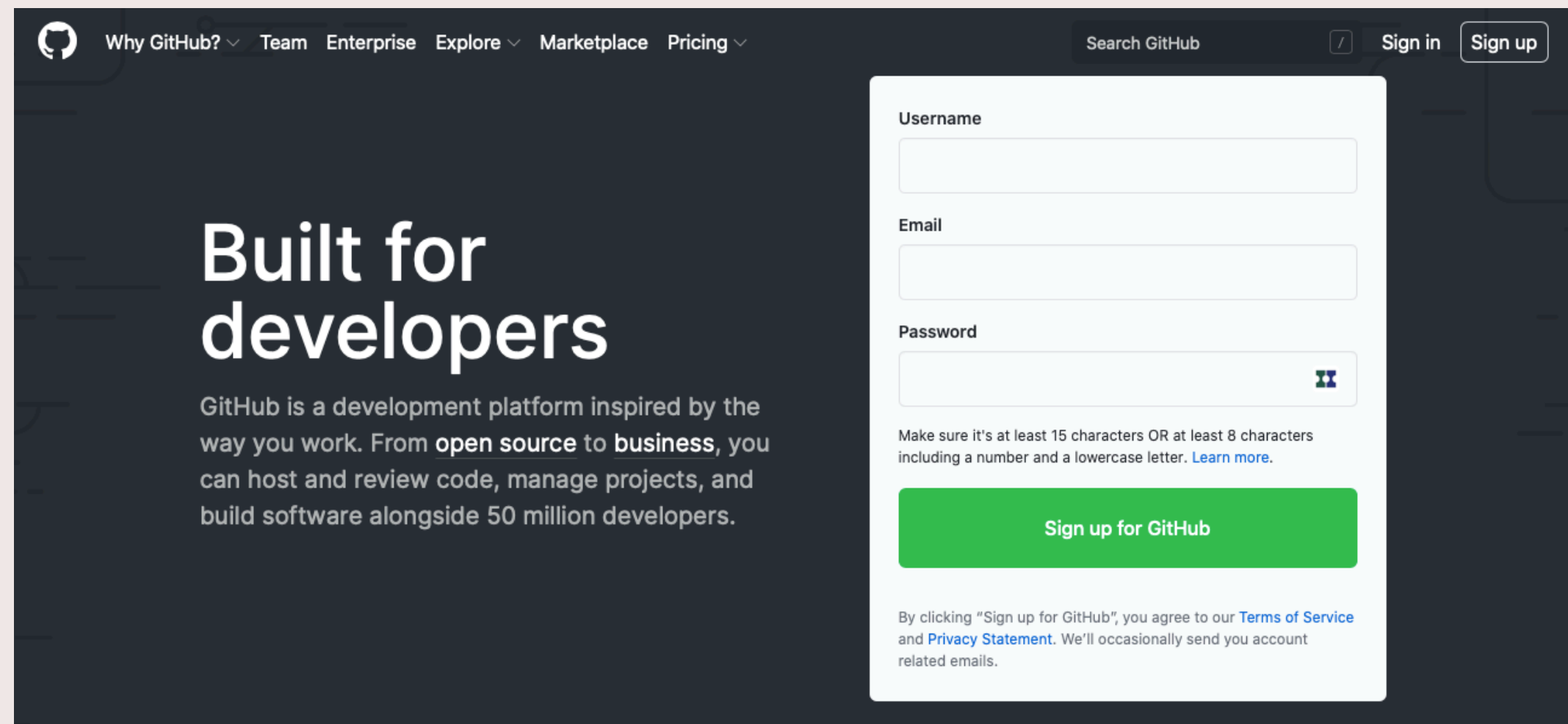
Why?

- It is an excellent way for students to work remotely on a collaborative project (hello, capstone!)

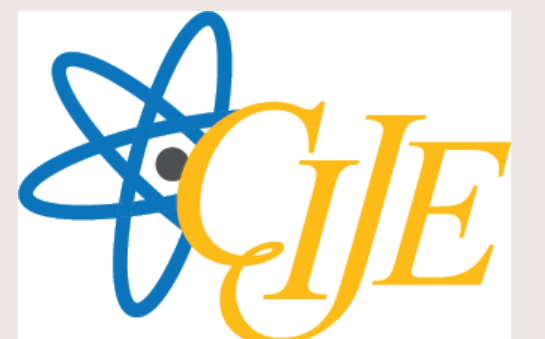- Single location for teacher reviews and grading

Create Personal Account

Directions for Sign Up
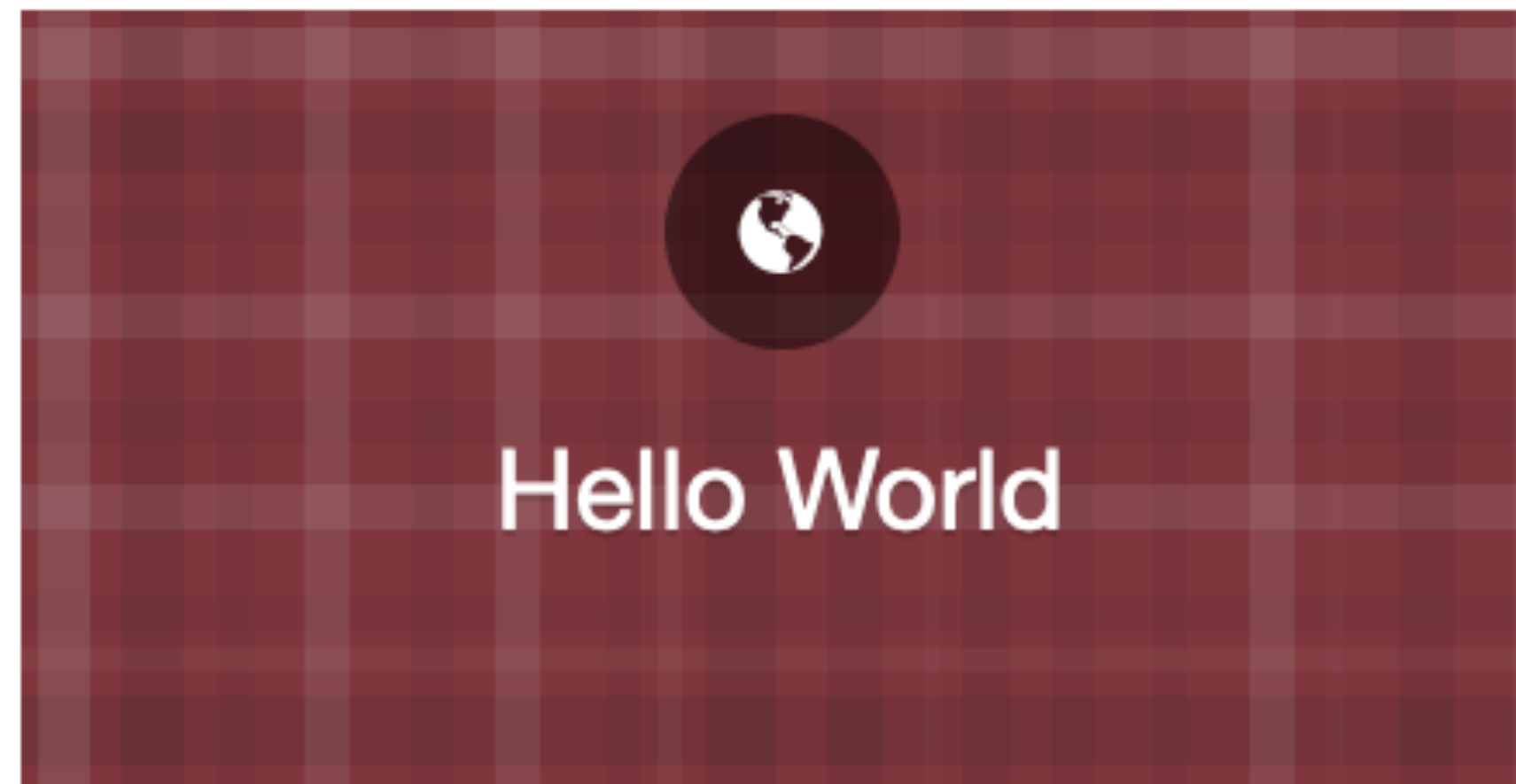
- Go to http://www.github.com
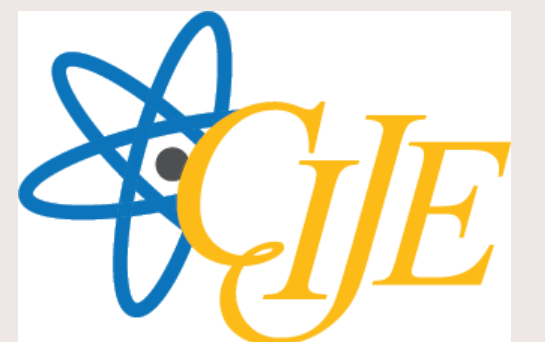

- Verify account in email address

GitHub Hello, World

Hello World

- Go to guides.github.com

- Select Hello World

The easiest way to get started with GitHub. In this guide you'll complete a time honored "Hello World" exercise, and learn GitHub essentials.
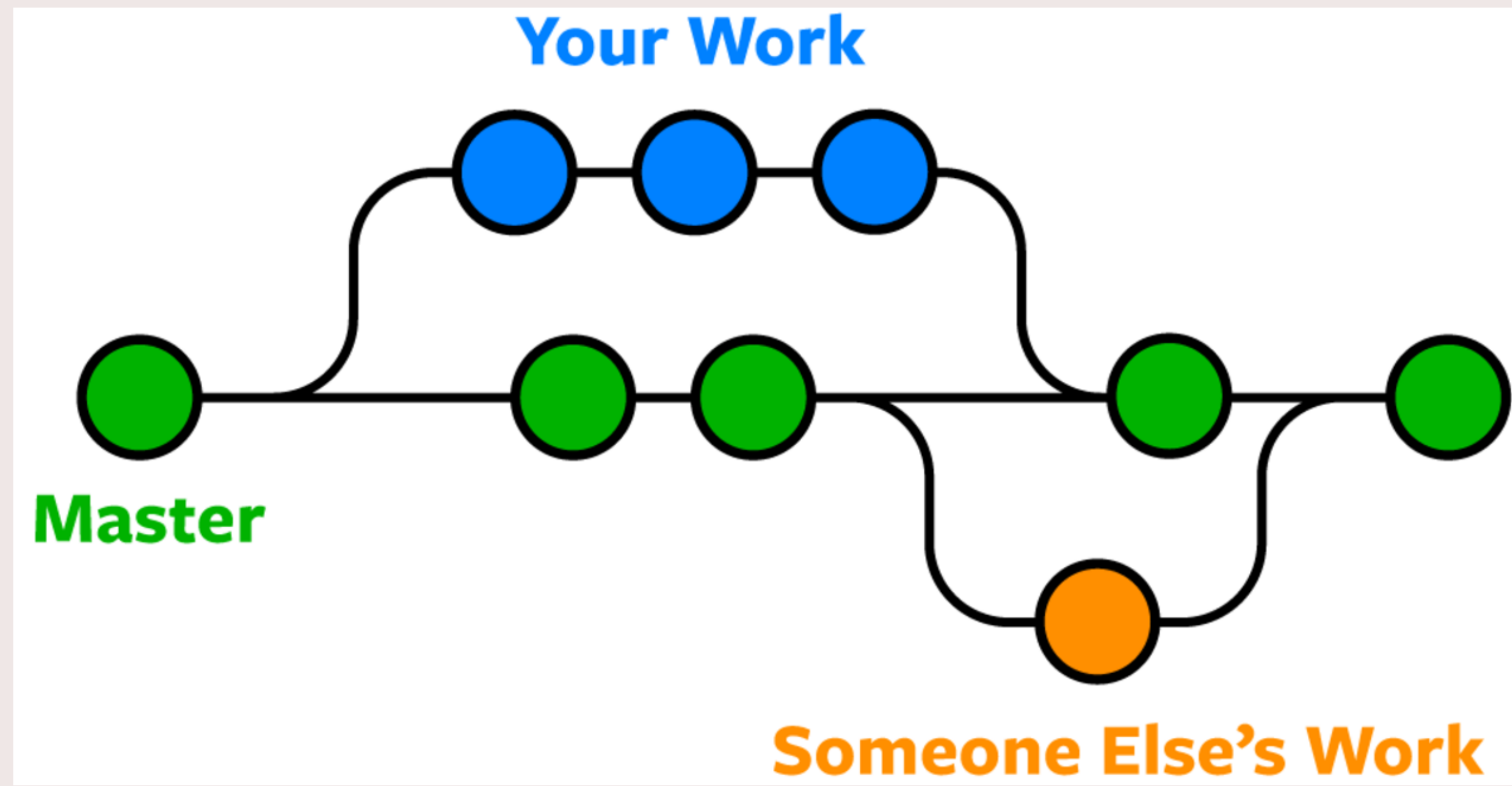
Hello World
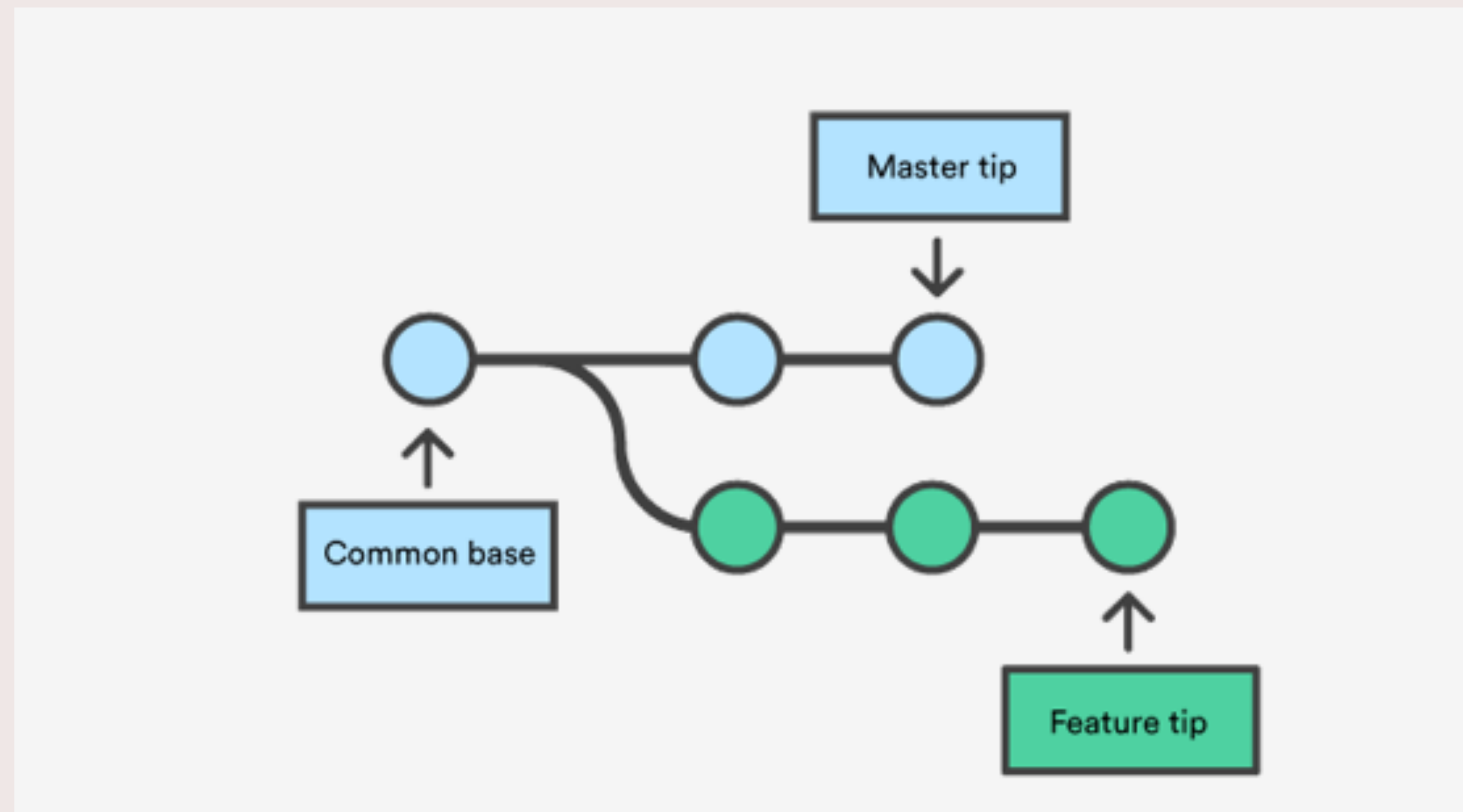
- [Go through create repository live]

Terminology: Branches

- A branch is an independent set of files starting from a common base
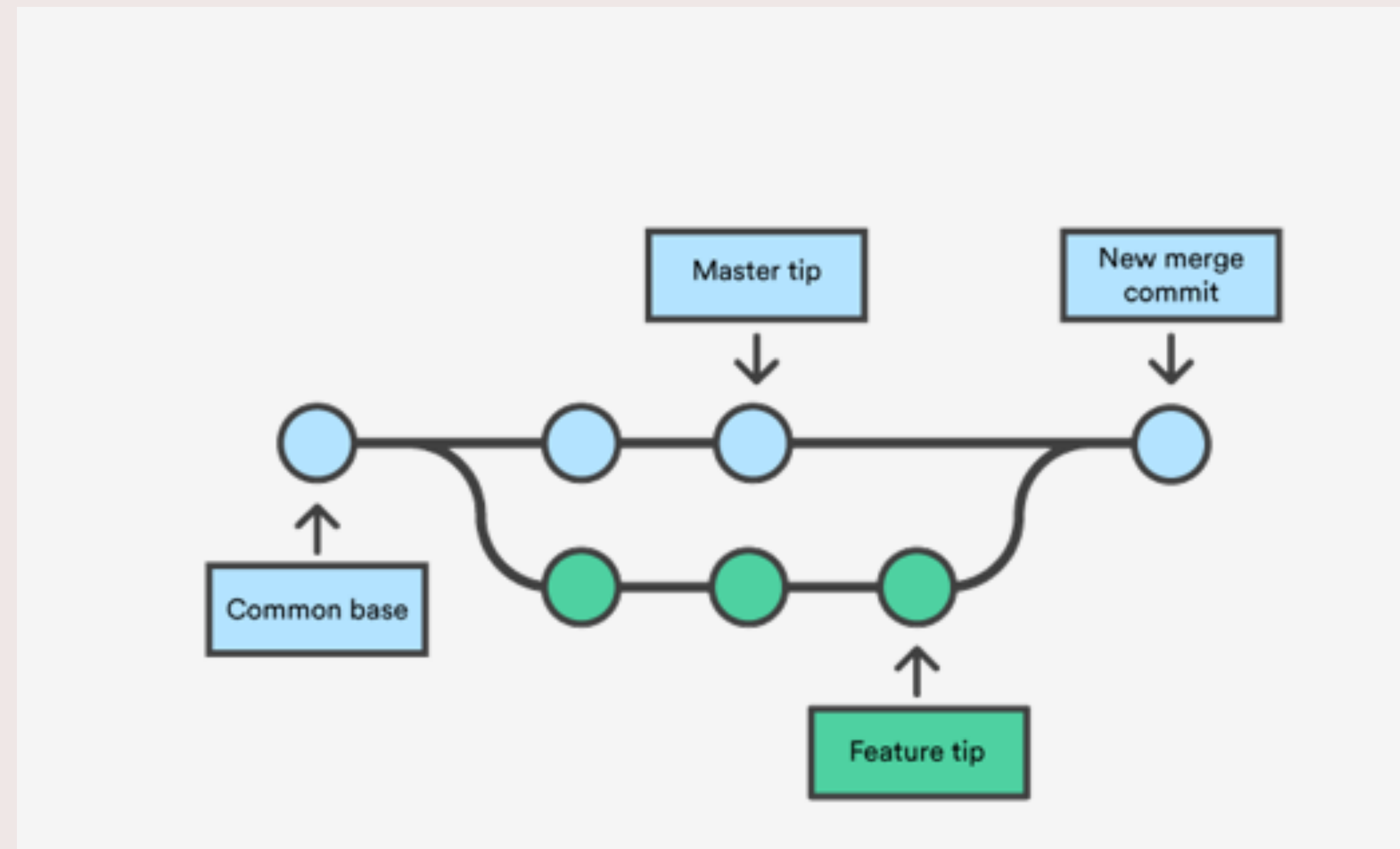
Terminology: Branches

- Individual user can work independently on a new feature WITHOUT affecting original

Terminology: Branches

- When (IF) the feature is completed, it can be *merged* into the common project
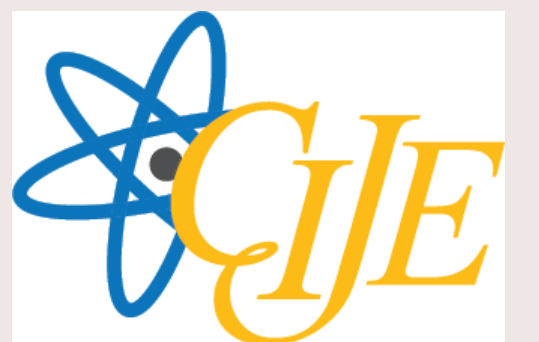
Hello World

- [Finish the rest of the Hello World guide live]

Collaborate

Collaborate

- Go to github.com/CIJE-STEM

- Go to github-learn-1 repository

- Submit and Issue saying how long an LED should stay on.

- Separately, edit Blink-Blink.ino, changing the delay time, and submit pull request.

Where We Are

Further Resources

Further Resources

- Further guides at guides.github.com

- GitHub Learning Lab at lab.github.com

- For advanced learners:

  - For learning Git (the underlying system of GitHub) Atlassian's Git tutorials are awesome:

    - https://www.atlassian.com/git/tutorials