

Madagascar Penguins





PROGRAMMING: BEST PRACTICES

Part 2 – Introduction to Git & GitHub





REVIEW

Backward Planning



Planning backwards so you can live your life forwards

...and move backwards to where you currently are.



Backup Your Code (Version Control)

Atlassian
Bitbucket [Features](#) [Integrations](#) [Server](#) [Data Center](#) [Pricing](#)

Code, Manage, Collaborate

Bitbucket is the Git solution for professional teams

[Get started for free](#)

GitHub, ...c. [US] | <https://github.com>

Built for developers

GitHub is a development platform inspired by the way you work. From **open source** to **business**, you can host and review code, manage projects, and build software alongside millions of other developers.

Pick a username

Your email address

Create a password

Use at least one letter, one numeral, and seven characters.

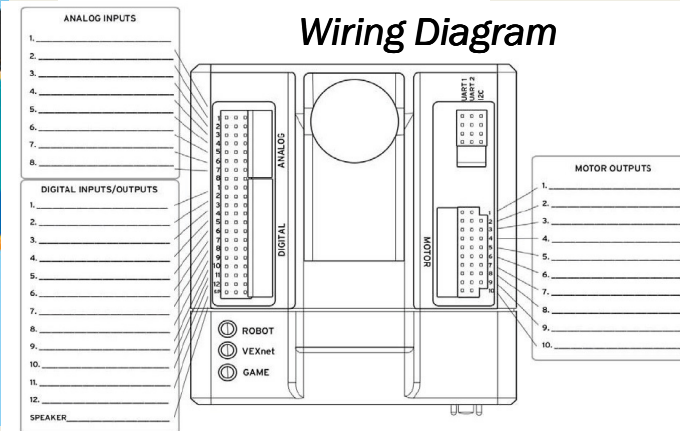
[Sign up for GitHub](#)

By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We'll occasionally send you account related emails.

Two Programmers



Wiring Diagram

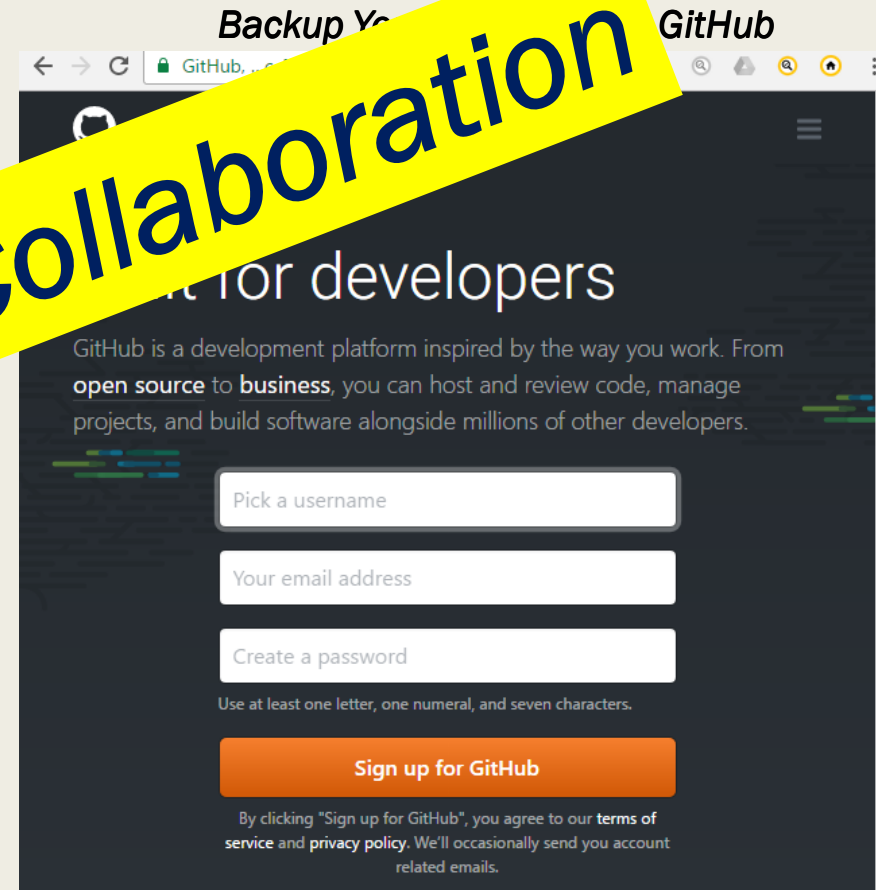


Today's Focus

Two (or more) Programmers

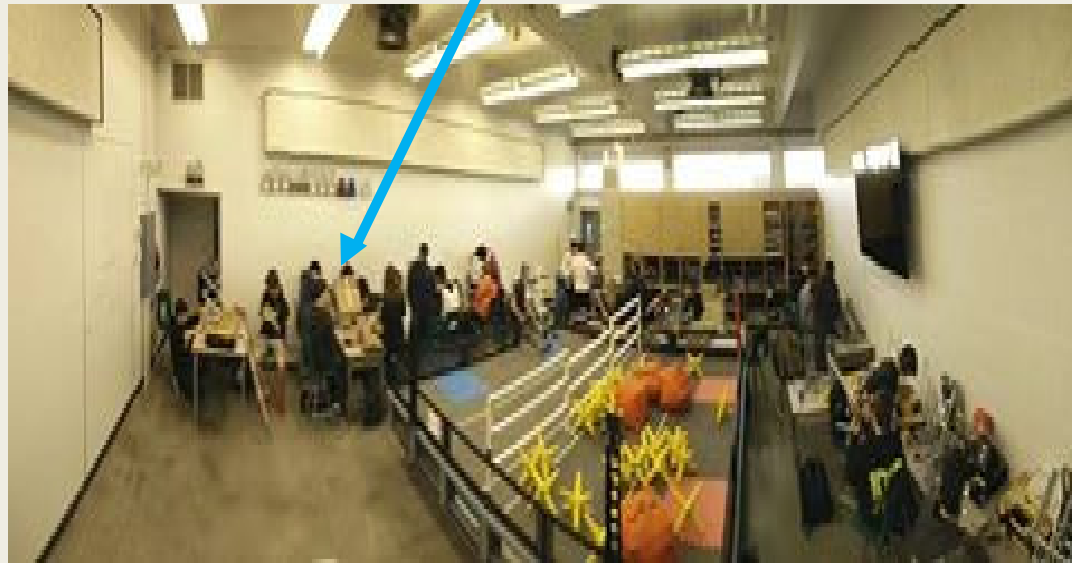


Teamwork & Collaboration

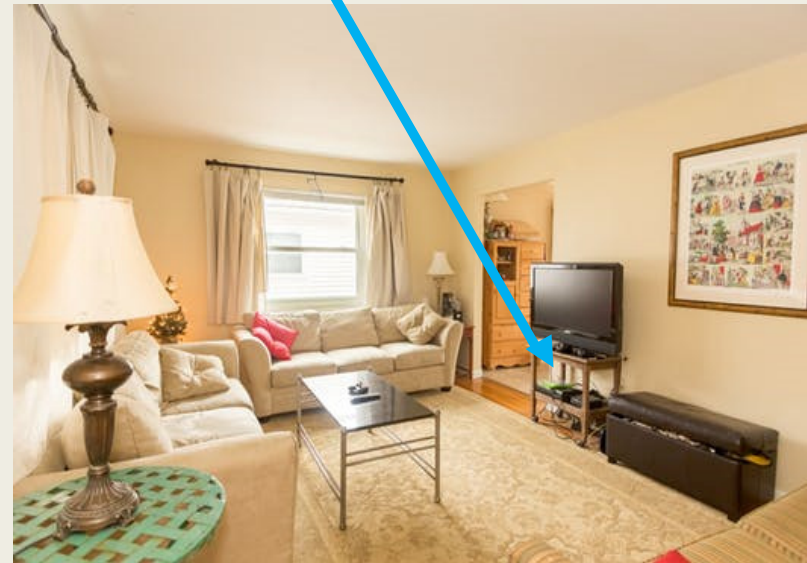


Scenario 1

YOU – at school



Your COMPUTER – at home



Scenario 2

Your computer crashes.....

**FATAL
ERROR!!!**

All your files are
gone to never-
never-land.



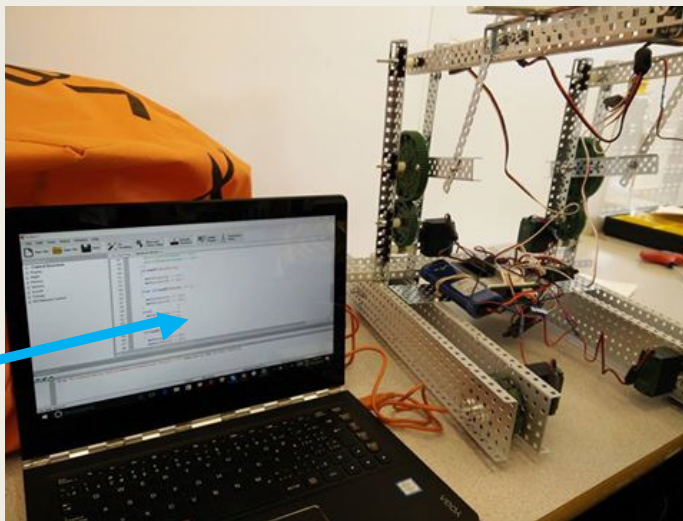
Scenario 3



**YOUR
FRIEND
In class**

YOU...

**...have a
working
program**



...Or at home

Scenario 4

*Code for
Ultrasonic Sensor*



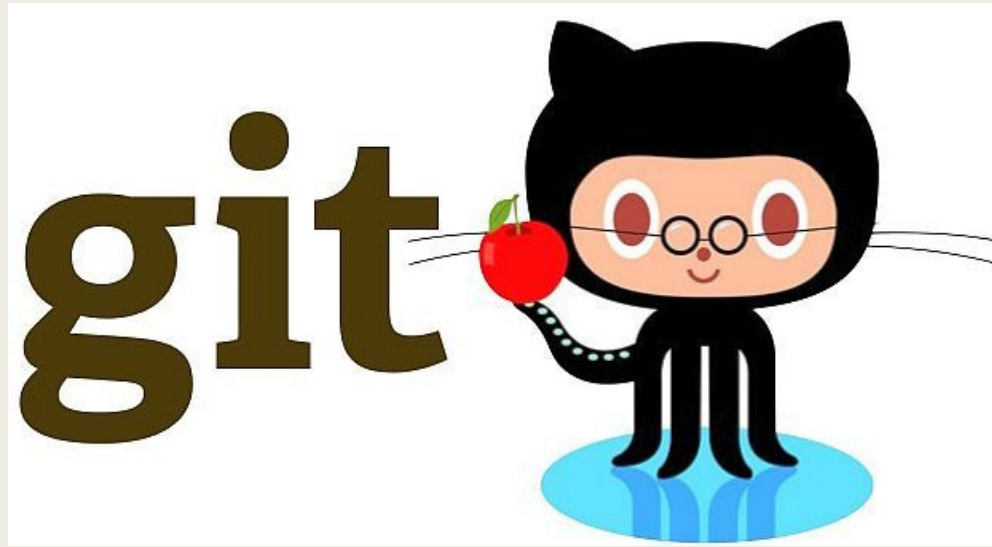
*Code for
Potentiometer*

Scenario 5

*Comes to
Robotics Academy
on Day 1*



*Comes to
Robotics Academy
on Day 2*



Software (“in the cloud”) that allows you to:

1. Keep track of the history of your files, and any changes you make
2. Collaborate & work in teams to write code

Why Git?



Scenario 2

Your computer crashes.....

Backup and Restore

All your files are gone to never-never-land.



Why Git?



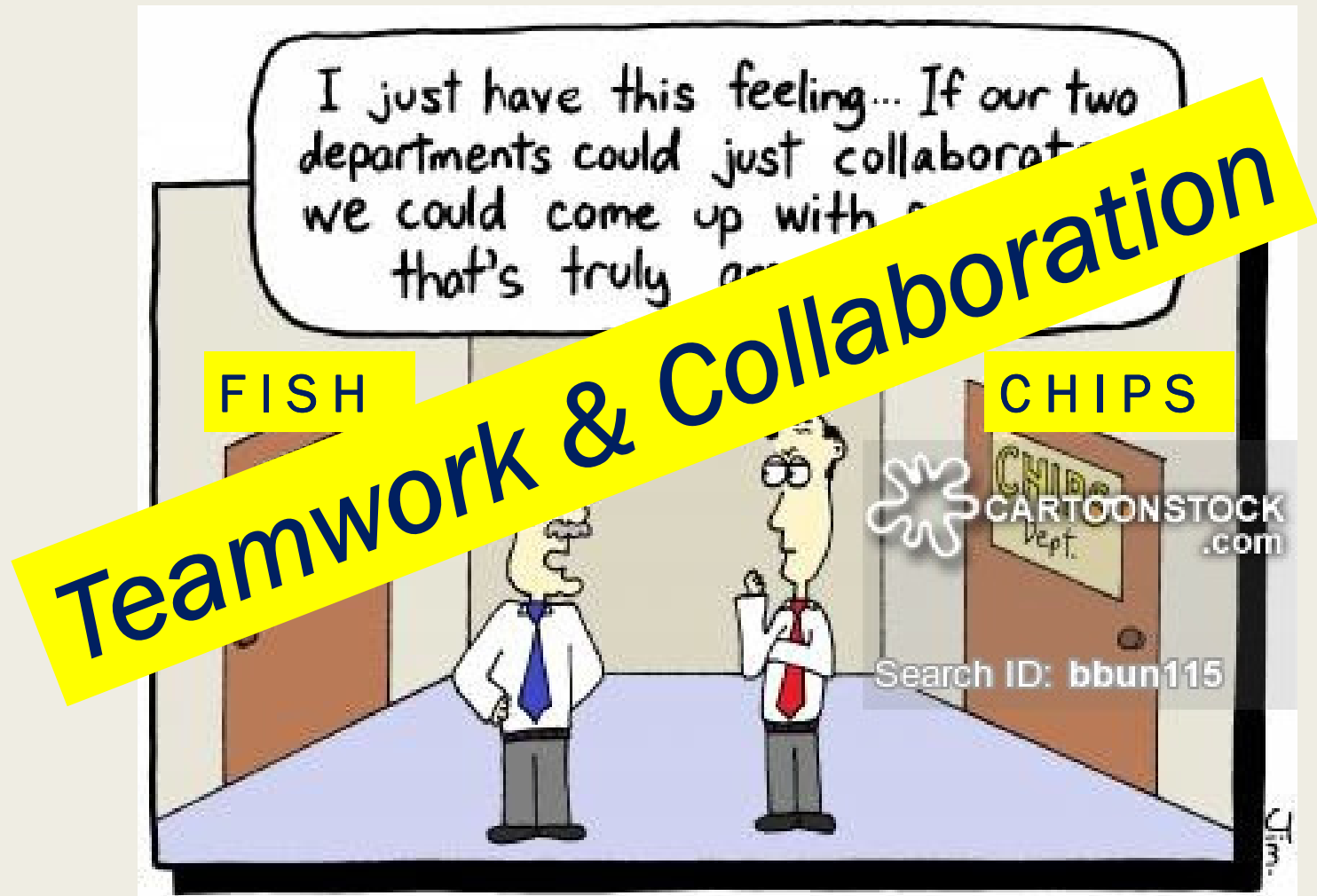
Why Git?

Name
120525_document_updated.txt
120604_document.txt
120605_document_amend...
120605_...
...
...
...
...
document_meeting.txt

**Clutter Free Workspace
On Your Computer**



Why Git?



Why Git?



This repository Search Pull requests Issues Marketplace Gist

1010Robotics / Teacher-Stuff Private

<> Code Issues 0 Pull requests

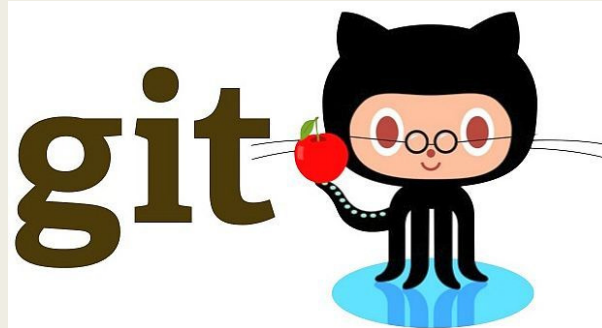
Track changes (with messages)
& Track Ownership

Commits on May 23, 2017

-  Initial Commit - presentation on Git & GitHub ...
mchugani committed on GitHub 2 days ago
-  Initial commit
mchugani committed 2 days ago

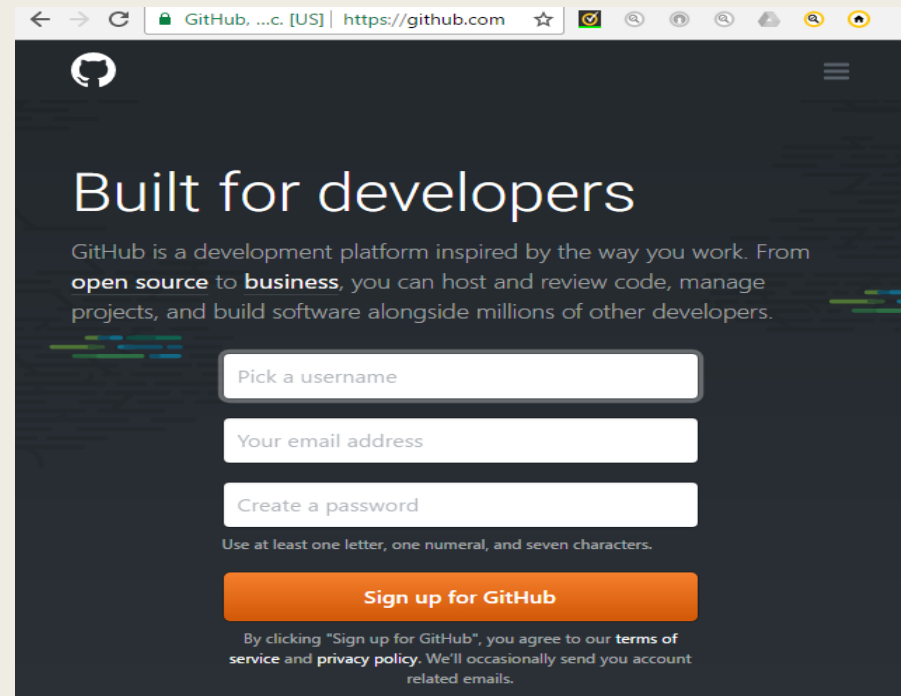
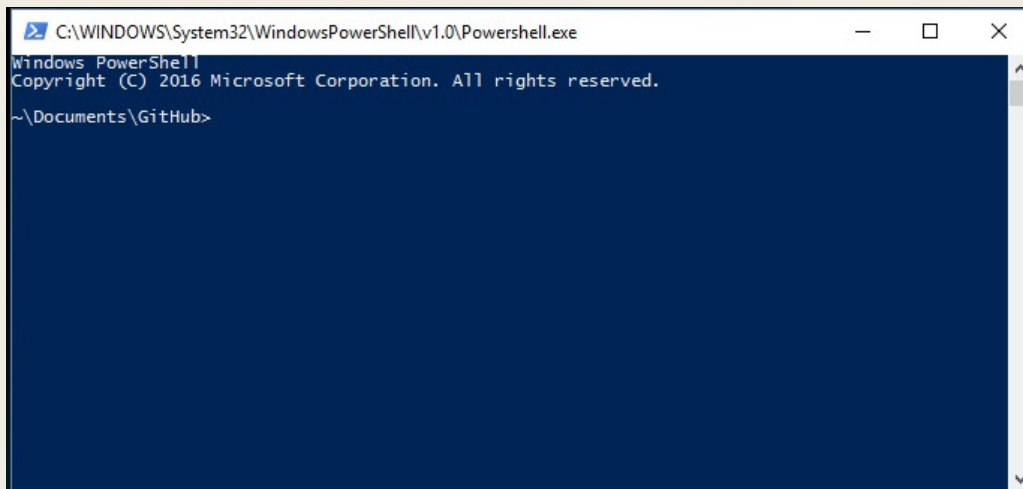
Why Git?





Command Line Interface (CLI)

Graphical User Interface (GUI)



Why GitHub?

- If coming back to *Robotics Academy* next year – we will be using GitHub
- If going to *University* – some of your professors may be using GitHub
- Its catching on – some of your *Secondary School teachers* may use GitHub next year
- When you go to work – your *Employer* may be using GitHub

Why GitHub?

1010Robotics.github.io b x

Secure | https://1010robotics.github.io

1010Robotics
West Vancouver School District Robotics
Academy

What else can we use GitHub for?

What would you like to see on the 1010Robotics website?

// PRESENTATIONS: PDFs of classroom presentations

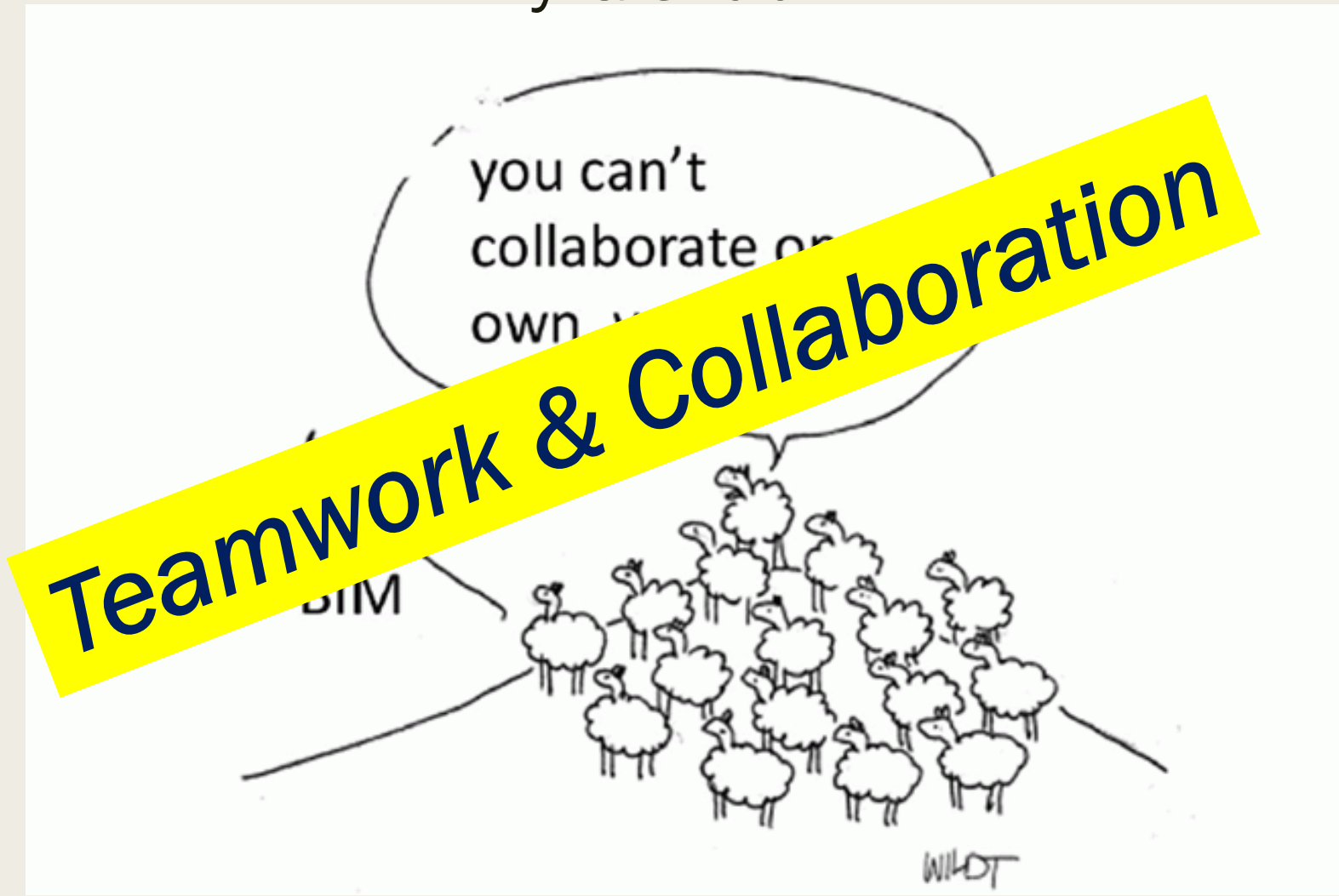
// RESOURCES

What can you contribute?

This page was generated by GitHub Pages.

Showcase YOUR portfolio on YOUR web site....

Why GitHub?



Teamwork & Collaboration

you can't
collaborate on
your own

WILD

Your mission.....

1. Go to www.GitHub.com
2. Create your account
 - username
 - password
 - photo
3. Choose free student account
4. Go to <https://1010Robotics.GitHub.io>
5. Select a link, and click on [View on GitHub](#)
6. Submit an [Issue](#)

In Conclusion...



Teamwork & Collaboration

Talent wins
but teamwork and intelligence
wins championships.
- Michael Jordan