CS 152: GitHub and IDEs

CS 152: Python for STEM

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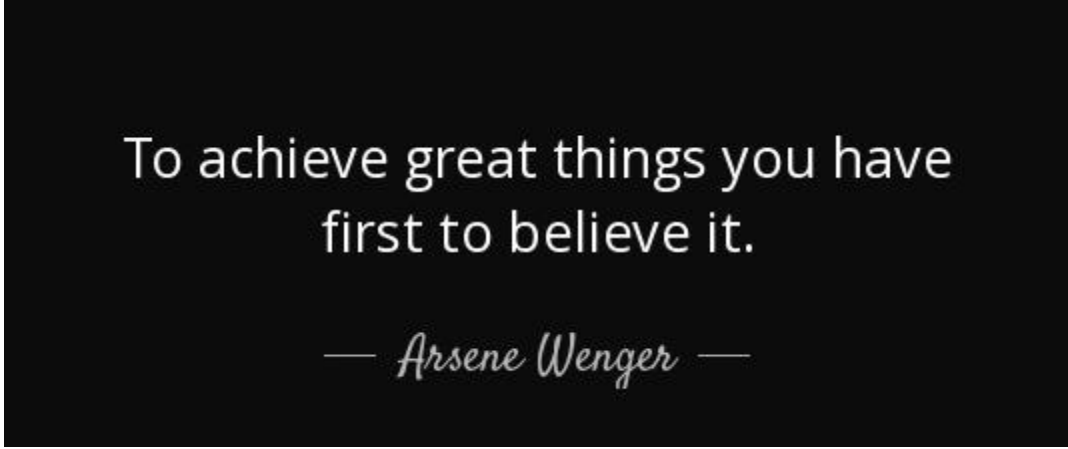
Weekly Announcements!



TODO Reminders:

- Coding Exam 1 opened since Monday: throughout the week – one submission attempt assignment
- Lab 03 – Warm Up
- Thursday Lab: IDE install help
- Friday Canvas Exam 1 – Proctored CS110

Git

- Git (2005)
  - Version Control System (VCS)
    - System used to manage versions of software code
  - Developed by Linus Torvalds for Linux Kernel
    - Yes, Torvalds is also original Linux kernel developer
    - It is now managed by thousands of people, so needed ways to handle the software merges

GitHub

- GitHub (2007)
  - Hosting provider for software development
  - Uses Git and integration with Git
  - Has a lot more tools for software development as part of it (Kanban boards, issue tracking, inline code, dev-ops)
  - Used for open source, enterprise, and personal use
  - NOTE:
    - As software developers, you should have a GitHub account setup
    - Used in industry

GitHub – Do's

- Do
  - Setup a personal profile
    - You can register as a student – gives you access to other tools
  - Have Git installed on your machine
    - The purpose is local distributed copies, merged into main repository
  - Put up *personal projects* that mean something to you (Portfolio)
  - Star interesting repositories
  - Follow interesting people
  - Eventually: help with opensource projects

GitHub – Dont's

- Don't
  - **<u>Don't</u> put code created for a class as public repositories**
    - Private is OK
  - Don't worry about all the details
    - You will learn about it over multiple years!

GitHub – For CS152

- You won't need a GitHub profile
- You will want / need Git on your local machine
  - If you plan to code on a local machine
- Installing Git will
  - Allow you to keep class code updated, access to slides, access to knowledge check code, and more
  - Allow you to quickly assess the labs "provided files"
  - EXAMPLE:
    - git clone https://github.com/CSU-CS152/Handouts.git
      - Copies all the code and slides to your local computer often in a directory called Handouts
    - git clone https://github.com/CSU-CS152/Lab04OperationStation.git
      - Copies the template files, and readme file for Lab04 to your local computer
      - In a directory called Lab04TwentyQuestions
  - Update Class repository before every lecture
    - (inside the Handouts directory on your computer type)
    - **git pull origin main**

Integrated Development Environments

Integrated Development Environments

- Starting next week you will use an IDE
- Benefits:
  - Code highlighting
  - Debugging Tools
  - Syntax Error marking (before compiling)
  - File Management
- Cons:
  - More complicated interface
  - Must really think about file structures
  - You may occasionally need to mess with configuration files

This Semester

- VS Code
  - By Microsoft
  - Considered “lightweight”
  - 3rd Party Extension based
    - After installing, you need install the Python extensions.
  - Con: configuration is a bit harder, but extremely flexible
    - Allows installing locally, but running on CS machines to test code (matters for later classes)
- Integrate directly with GitHub!!