

# Day 1

## Goals

- Course introduction
- Setup Tools necessary for coding and git
- Review the basics of python programming
- Introduce the basics of git version control

## Introduction

- Please check out the Syllabus.
- Extra help
- General Structure of the course
  - projects
  - group work
  - tests
  - honor code
  - final project
- Sign up for GitHub
- Download PyCharm CE
- Find out if you have an M1 Mac or not

## Introduction to Python

To get started writing a python program you can open a new project in PyCharm called 'CS570\_Day\_1'.

- Show students basics of Python
  - How to make a function using def
  - How `__name__ == "__main__"` works
  - How to run a program in PyCharm
  - How to run the debugger in PyCharm

## Introduction to git and GitHub

- What is git
  - It is a method of version control.
  - Version Control is a way to make changes but not lose what you had previously done.
    - \* Many times in writing a program you want to change things that work now, so that they work better.
    - \* You have to break to build it.
  - git has a way to putting landmarks in your changes called “commits”
  - You make a commit when you have made something complete and every commit comes with a message about what you did

- git also is helpful for having several people work together on the same project
- we do this through the idea of “branches” different people work on different branches and then are able to merge their code together when they are done
- Let’s do an example:
- GitHub is a place that records the git changes that happen to a project and make the sharing of information possible.
- GitHub is a place where you can share your progress on a project and then merge it with other’s work.

## **Breaking projects into separate files and branching**

Two ideas come together to make git and GitHub and Python work so seamlessly together. Object-Oriented Programming and branches.

- Introduce OOP
- Introduce Branching

## **Homework**

Tonight’s homework is to complete a survey about your programming background.

<https://forms.gle/PpT5mgXRdZRBVhGG9>