

Lecture Notes

September 8, 2020 First day of class!

- [Zoom](#) class sessions - if you are watching live, you probably already found this.
- [Piazza](#) - sign up (through courseworks) if you do not already have access. Future [announcements](#) will be posted in piazza not in courseworks and questions/comments during live class sessions should be posted on piazza or courseworks chat, not on zoom chat. Piazza has a mobile app, see <https://piazza.com/product/mobile>.
- [Calendar](#) - lecture notes will be posted as “live links” into my google docs. I will convert to pdf and post in courseworks [Files](#) when finalized after class sessions.
- Courseworks [Home Page](#) has lots of important info, we’re going to spend a while reviewing it.
- [Video Library](#) recordings of class sessions are supposed to be available within 24 hours.
- [Syllabus](#) is just an unorganized list of topics right now, followed by an automatically populated list of assignments.
- [Assignments](#) - submit all assignments in courseworks unless the assignment says otherwise. You can look

at a few upcoming assignments now. Some students have already submitted the first assignment.

- [Files](#) - lecture notes, assigned readings, other background materials.
- Textbook - There is no textbook for this course. Any required readings will be online and will be either: freely available to everyone, 'free' via Columbia's digital library login (your uni and password) at <https://guides.library.columbia.edu/COMS>, or posted in courseworks Files.

Let's look at the first assignment for this course:

“Assignment I0”:

<https://courseworks2.columbia.edu/courses/104335/assignments/472886>. It's labeled 0 because it's graded complete/non-complete and should be very easy. It's labeled I for individual, a later series of assignments will be labeled T for team.

To do this assignment, you need to learn to use github (or already use github). Both the individual and team projects require submitting your code in a github repository. Many students include their github userid in their linkedin page and job applications so potential employers can see their work.

This assignment includes watching a video that explains the basics of version control using github, plus my survey indicated that most of you already use github, so I'm not going to give a full lecture on version control, just a very brief introduction.

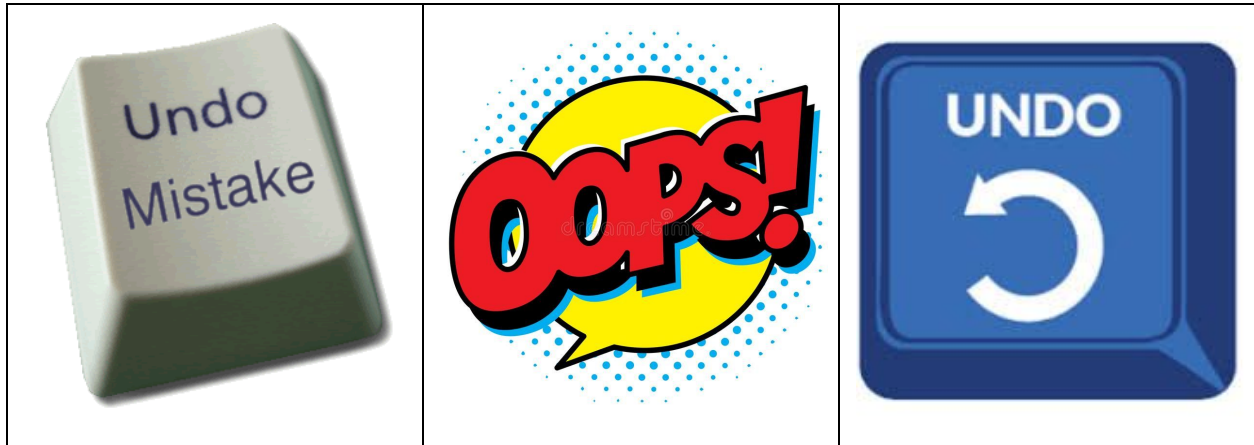
Working in a team: *Version Control*

Software engineers should use version control when writing source code, even when working in a team of one member (i.e., alone), to “collaborate” with one’s past and future self.

Version control is also useful for documents that have nothing to do with software ⇒ google docs supports rudimentary version control for individual documents.

Version control is also known as configuration management or source code control. There have been many version control systems since at least the 1970s ([sccs](#), [rcs](#), [cvs](#), [svn](#)).

A basic tenet of software engineering is people make mistakes. Version control, combined with frequent “commits” (saves), make it easy to return to a previous version.



Another basic tenet of software engineering is changing a working program often breaks it. This is the primary rationale underlying “regression testing”, which will be covered in depth later in the course. Version control makes it easy to return to the previously working version, as well as recording who broke it.



From reddit: [Would you accept a job at a software company that doesn't use version control?](#)

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Posted by u/mothzilla 3 years ago

Would you accept a job at a software company that doesn't use version control?

Asking for a friend...

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cskittykat 25 points · 3 years ago

no

fj333 19 points · 3 years ago

For the right price, yes, ;-) I'd settle for about 10x what the companies *with* version control are paying.

[deleted] 8 points · 3 years ago

Only if the job was "CEO".

Initial assignments for this course:

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“Assignment I1”:

<https://courseworks2.columbia.edu/courses/104335/assignments/482592>

To do this assignment, you need to code a simple web application in Java. You have to use Java because the assignment provides skeleton code, in Java, for you to fill in. The skeleton employs the model-view-controller (MVC) architecture, which will be discussed in Thursday’s lecture.

There will be two more individual programming assignments after this one, which will use JUnit to test your tic-tac-toe code and then add a database for saving moves during the game (and test it).

“Assignment T0”:

<https://courseworks2.columbia.edu/courses/104335/assignments/486855> This is the initial team assignment, to form a team and choose which programming language your team will use (C/C++, Java, Javascript, Python).

It's not due until October 15, after the individual project and first assessment, but you can start forming teams any time.

There is a “search for teammates” thread in piazza that you can use to look for teammates

https://courseworks2.columbia.edu/courses/104335/external_tools/1456

If time permits, at the end of each of the next few class sessions I will try to put everyone in breakout groups so you can introduce yourself and meet each other.