

Source Code Control

CS2263 – Systems Software Development


Breakdown, Tom Petty (Tom Petty and The Heartbreakers, 1978), <https://www.youtube.com/watch?v=dqxns-JTTqA>

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Lecture Learning Outcomes

At the conclusion of this presentation students should be able to:

- Create a git repository.
- Commit and push their code to git
- Pull their code from git



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Resources

- Laster, B. 2016. Professional Git. John Wiley & Sons.
 - (eBook available from lib.ca.unb.ca)
- Oslsson, A and R Voss. 2014. Git Version Control Cookbook. Packt Publishing.
 - (eBook available from lib.ca.unb.ca)
- Dudler, R. Git - The Simple Guide. <https://rogerdudler.github.io/git-guide/>.
 - (accessed 23 September, 2019)



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Source Control

- What is it?
- Why would you want to use it?
 - Benefits
 - Costs
- What capabilities does it provide?
 - For you
 - For a team



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GIT Clarification

Git is an open-source project for source code control

Github is an online service that implements git

It is entirely possible (and we do) to have a git server not connected to github.

FCS lab machines have git client software installed on them.

No, you can't access the FCS git server from your computer



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GIT Commands

Create: `git init`

- Identifies the current directory as a git working directory
- Not required for this course – you have a repo already

Create: `git clone`

- Copy an existing repository:
 - `git clone https://vcs.cs.unb.ca/git/cs2263-<userid>`

```
[wightman@gaea Lab2]$ git clone https://vcs.cs.unb.ca/git/cs2263-wightman
Cloning into 'cs2263-wightman'...
Username for 'https://vcs.cs.unb.ca': wightman
Password for 'https://wightman@vcs.cs.unb.ca':
warning: You appear to have cloned an empty repository.
[wightman@gaea Lab2]$
```



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GIT Commands

Read

- Update the repository from the remote to local repository. Not really required in your single-user context.

```
git pull
```

Update the repository

1. Identify the files to add: `git add <filename>`
2. Commit the changes to your local repository: `git commit -m "message"`
3. Commit the changes to the remote git repository: `git push origin master`



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GIT Only the Beginning

- This instruction is what you need to get started using git as a personal repository with a single branch to a single git working directory (the situation in this course)
- If you need more to deal with merge conflicts among your entire development team spread across the globe, each working on different branches, then you'll need to do more study.



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