



ISDS 3105 – R programming

T-TH 3.00–4.20 PM

Room: 1835 BEC

Dario Bonaretti

Office Hours: T-TH 4.30–5.30 PM

Room: 2400b BEC

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VERSION CONTROL



MyAnalysis_01.R
MyAnalysis_02.R
MyAnalysis_03.R
MyAnalysis_withCharts_04.R
...
MyAnalysis_withCharts_20.R

Version history of 'SecuringYourServer'

Dropbox keeps a snapshot every time you save a file. You can preview and restore previous versions.

Version 114 (current)	<input checked="" type="radio"/> <input type="radio"/>	 Edited by Matt Cone
<input checked="" type="radio"/> Version 113	<input type="radio"/> <input type="radio"/>	 Edited by Matt Cone
<input type="radio"/> Version 112	<input type="radio"/> <input type="radio"/>	 Edited by Matt Cone
<input type="radio"/> Version 111	<input type="radio"/> <input checked="" type="radio"/>	 Edited by Matt Cone

VERSION CONTROL WITH GIT/GITHUB

Git is a version control system. It means you can use it to track the current version of your folder (or repository or repo).

To create a snapshot of your repo at a certain point in time, you save the files you need to track and create a **commit**.

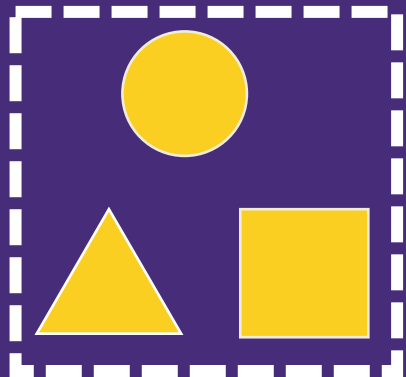
WHY WE USE GIT + GITHUB



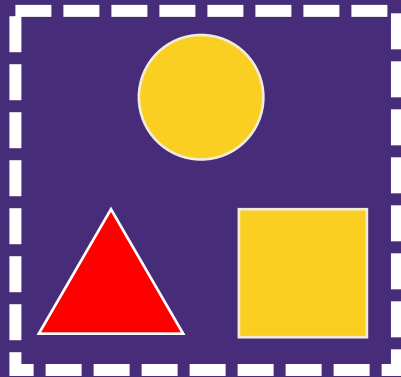
1. It allows to retrieve prior version of our code
2. It allows to share our code and add narratives in the README.md
3. It has a nice renderer for many useful file extensions (e.g., .csv, .pdf, .jpg)
4. It enables collaborative coding other members of our group

NAVIGATING THROUGH COMMITS

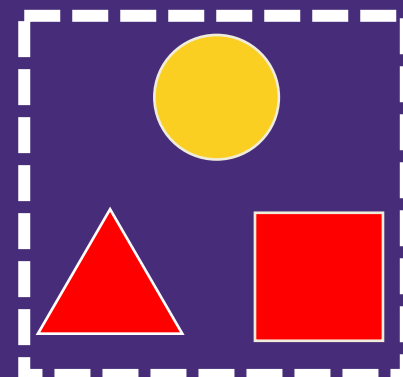
Commit 1



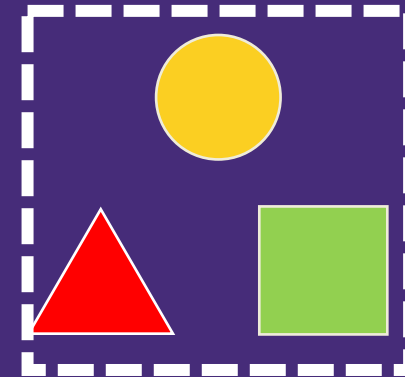
Commit 2



Commit 3



Commit 4

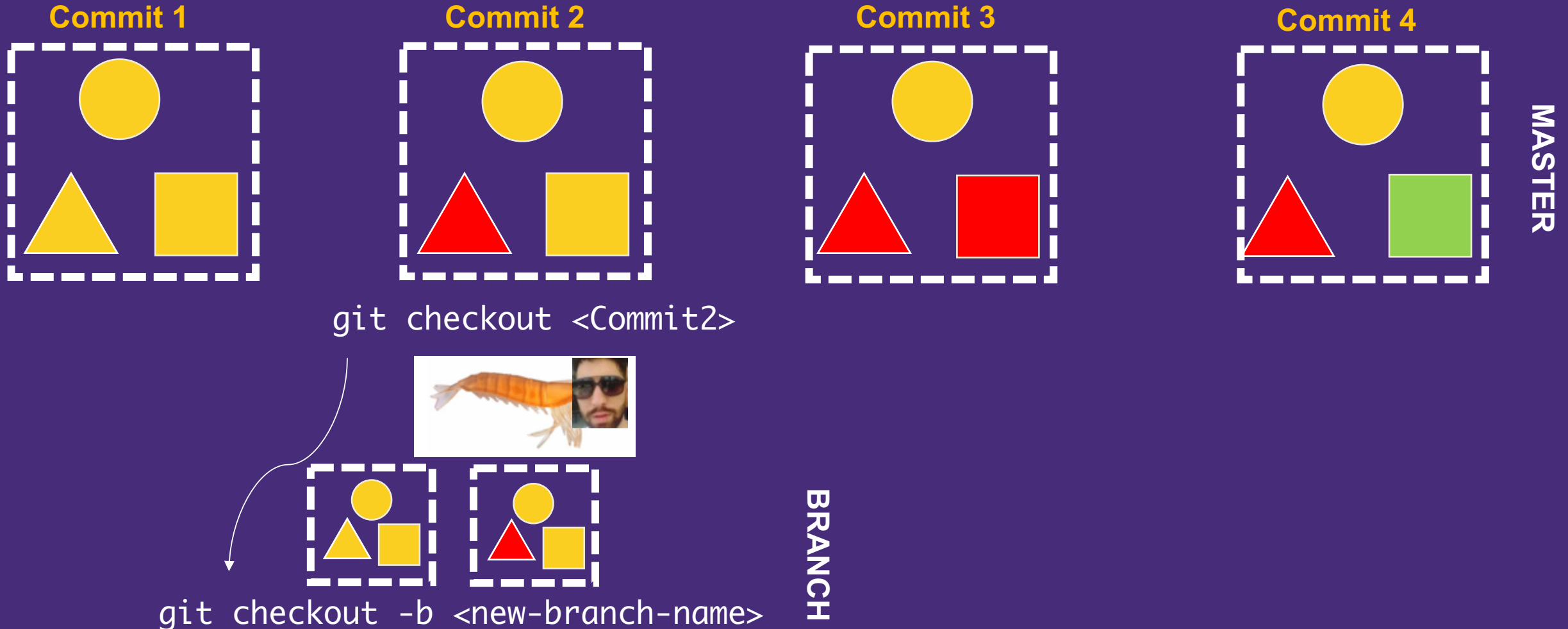


git checkout Commit3

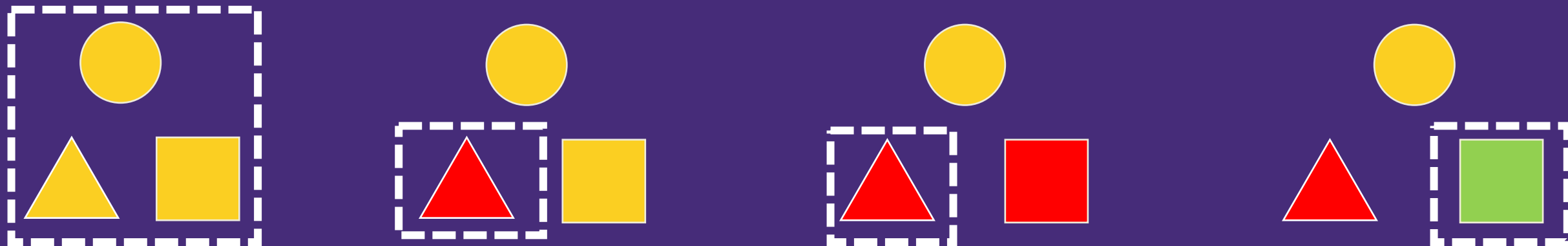


You can only see commits that precede the one you are currently at

NAVIGATING THROUGH COMMITS



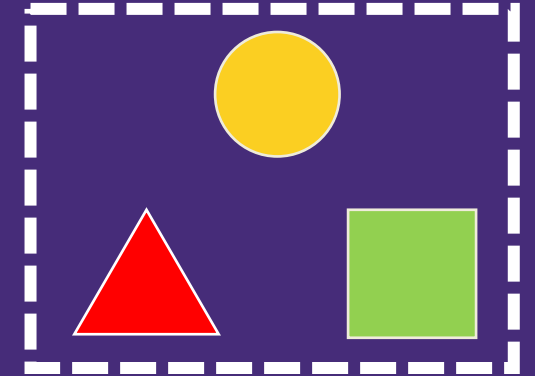
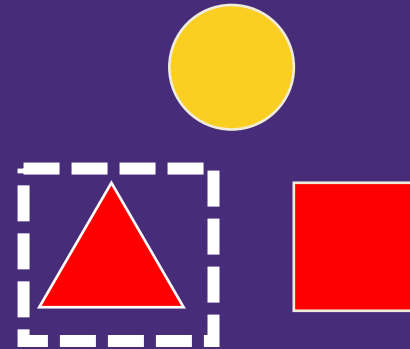
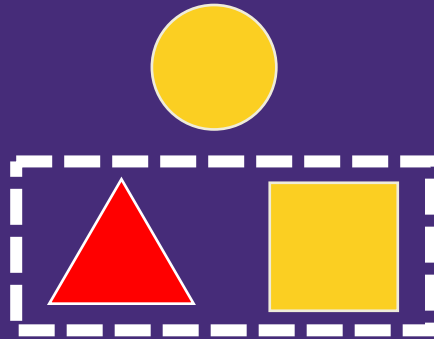
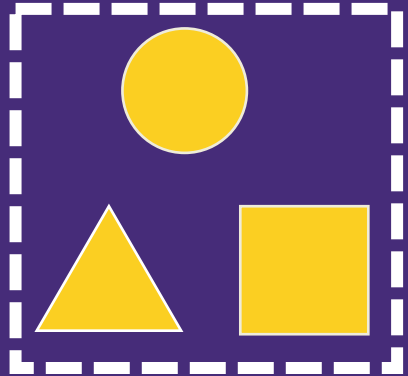
NAVIGATING THROUGH COMMITS



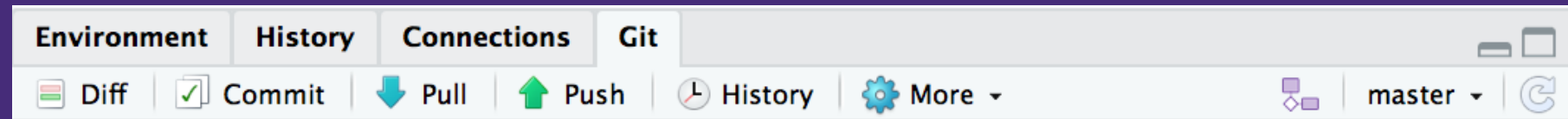
- The dashed line represents what you commit
- Anything outside the dashed line it's simply saved

Is there a way to checkout the red square once you commit stage 4?

NAVIGATING THROUGH COMMITS



To sync your local commits in Git with GitHub, you want to **PUSH** to your remote repo



This is the material for ISDS3105

Edit

Add topics

8 commits

1 branch

0 releases

Click clone

1 contributor

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

DarioBoh FIX assingment

assignments/assignment01

cheatsheets

midTerm_mock

README.md

FIX assingment

ADD materia

ADD exam

FIX link to r4

Copy this URL

Clone with HTTPS

Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/DarioBoh/ISDS3105_fa1



Open in Desktop

Download ZIP

FileEditCodeViewPlotsSessionBuildDebugProfileToolsWindowHelp

New FileNew Project...Open File...Reopen with Encoding...Recent FilesOpen Project...Open Project in New Session...Recent ProjectsImport DatasetSaveSave As...Save with Encoding...Save AllPreviewPublish...Print...CloseClose AllClose All Except CurrentClose ProjectQuit Session...

~/Desktop/LSU/ISDS3105_fall18 - master - RStudio

Create a project

InsertRun


DiffCommit


Staged	Status	Path
<input type="checkbox"/>	?	lectures/
<input type="checkbox"/>	?	assignment
<input type="checkbox"/>	?	assignment
<input type="checkbox"/>	?	assignment
<input type="checkbox"/>	?	assignment
<input type="checkbox"/>	?	assignment
<input type="checkbox"/>	?	assignment
<input type="checkbox"/>	?	midTerm_
<input type="checkbox"/>	?	midTerm_


studio/download/)
jennybc/happy-git-with-r/install-git.html)
om/jennybc/happy-git-with-r/github-acct.html)

New Project

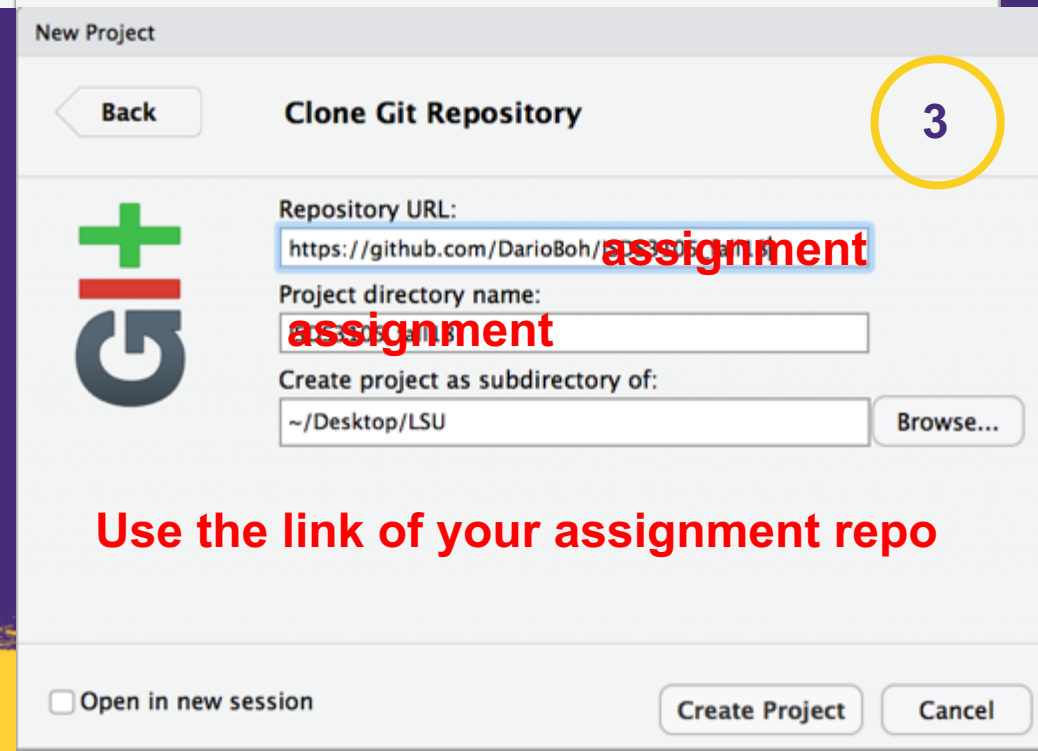
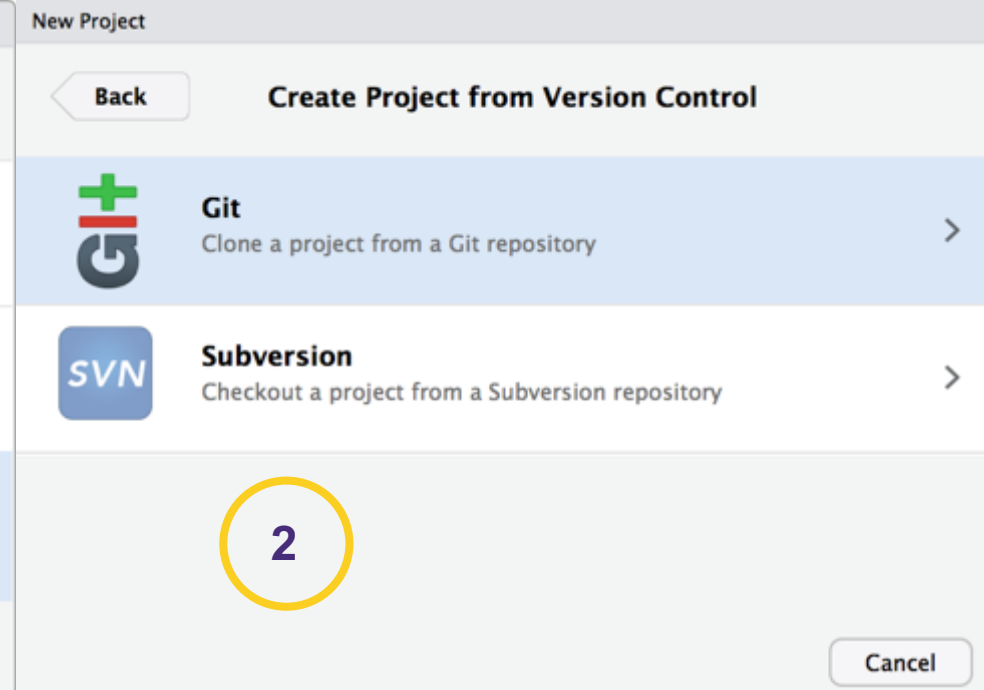
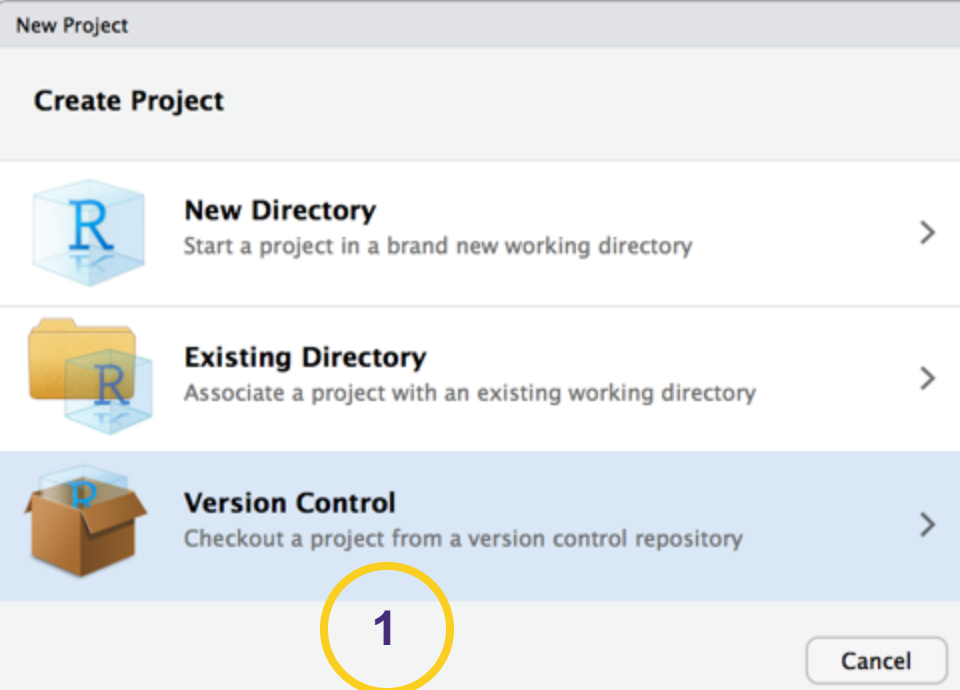
Create Project

New Directory
Start a project in a brand new working directory

Existing Directory
Associate a project with an existing working directory

Version Control
Checkout a project from a version control repository

Cancel



```
.gitignore x README.md x README.md x
Insert Run
1 # Assignment 1: Set up
2
3 Softwares to install:
4
5 - [ ] R [download](https://www.r-project.org/)
6 - [ ] RStudio [download](https://www.rstudio.com/products/rstudio/download/)
7 - [ ] Git - [instructions](https://beta.rstudioconnect.com/jennybc/happy-git-with-r/install-git.html)
8 - [ ] Slack Desktop (recommended)
9
10 Accounts to open:
11
12 - [ ] GitHub - [instructions](https://beta.rstudioconnect.com/jennybc/happy-git-with-r/github-acct.html)
13 - [ ] GitHub Developer Pack
14 - [ ] Slack
15
16 Create a private folder named `\assignments` and add me (`@DarioBoh`) as your collaborator. From now on, `\assignments`
17 is the folder where you will submit your assignments. Please make sure you keep the folder private to comply with the
18 University code of Conduct. Read [this
19 article](http://www.lsunow.com/daily/lsu-student-faces-discipline-after-another-student-copies-work/article_68fda758-2715-1
20 1e8-a81d-0367ea24525b.html) to reflect on why you do not want to publicly share homework/assignments during the semester.
21
22 On Moodle, submit the link to your GitHub profile.
```

```
5:46 Markdown
Console Terminal x
Terminal 1 ~ /Desktop/LSU/ISDS3105_fall18
FIX assingment

commit 6d5cdfa93c1aad28fce10ada7c6ac4f36fa32845
Author: DarioBoh <bonarettidario@gmail.com>
Date: Mon Aug 20 16:36:29 2018 -0500

FIX assingment

commit 496a2f1a0d4506ab62e5ad0b58e189a95be0410e
Author: DarioBoh <bonarettidario@gmail.com>
Date: Mon Aug 20 16:29:30 2018 -0500

FIX link to r4ds

commit e566304de2f44dac5fc894fb73e96bea9a679f3a
Author: DarioBoh <bonarettidario@gmail.com>
Date: Mon Aug 20 16:28:34 2018 -0500

FIX link to r4ds
Dario (master) ISDS3105_fall18 $
```

Environment History Connections Git

Diff Commit Pull Push History More

master

Staged	Status	Path
<input type="checkbox"/>	??	lectures/
<input type="checkbox"/>	??	assignments/assignment02_baseR/
<input type="checkbox"/>	??	assignments/assignment03_dataViz/
<input type="checkbox"/>	??	assignments/assignment04/
<input type="checkbox"/>	??	assignments/assignment05_dplyr/
<input type="checkbox"/>	??	assignments/assignment06_geoVis/
<input type="checkbox"/>	??	assignments/lesson7_practice.Rmd
<input type="checkbox"/>	??	assignments/lesson7_practiceSolution.Rmd
<input type="checkbox"/>	??	midTerm_mock/dbonar1.Rmd
<input type="checkbox"/>	??	midTerm_mock/exam.docx

Files Plots Packages Help Viewer

New Folder Delete Rename More

Home > Desktop > LSU > ISDS3105_fall18 > lectures > lesson00_introduction

	Name	Size	Modified
<input type="checkbox"/>	..		
<input type="checkbox"/>	introduction.pdf	22.5 MB	Aug 21, 2018, 4:30 PM
<input type="checkbox"/>	introduction.pptx	84.3 MB	Aug 21, 2018, 2:33 PM

EXERCISE

1. Create a new R project from your assignment folder
2. Add a README.md file with the list of your assignments
``
 - [x] assignment 1
 - [] assignment 2
 - [] assignment 3``
3. Push to your repo

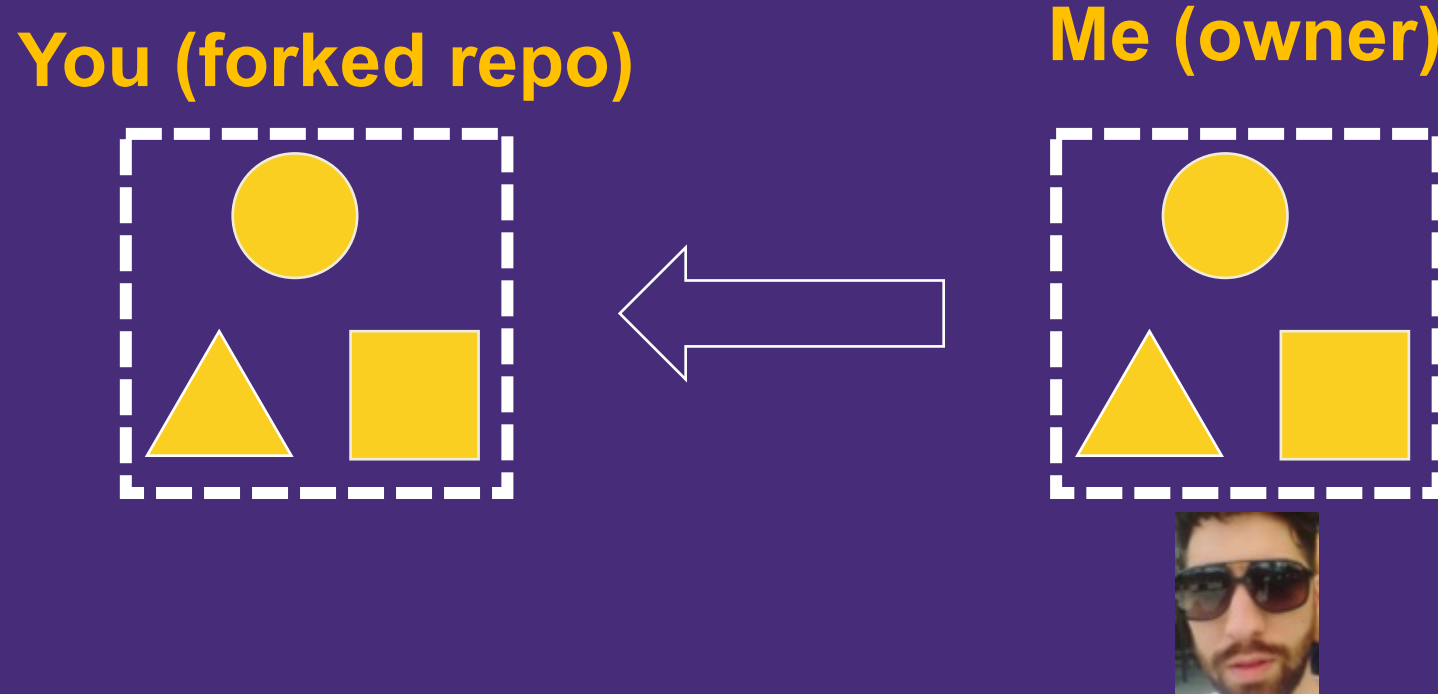
FORKING DarioBoh/ISDS3105_fall

A fork is a copy of a repo on your GitHub space. You want to use forks for:

- 1. Fork (copy) a repo**
- 2. Make changes**
- 3. Submit a pull request to the project owner**

The project owner receives the pull request and can merge it into his repo.

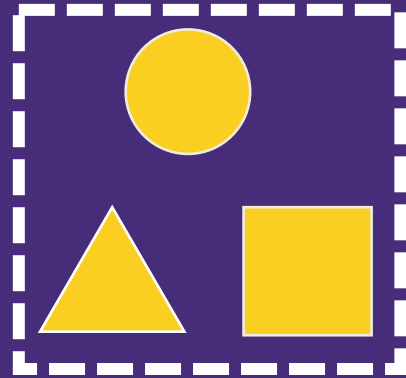
FORKING DarioBoh/ISDS3105_fall



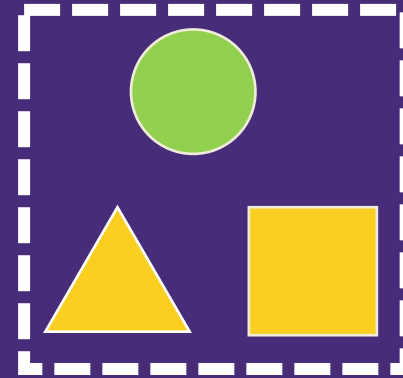
But once you fork a repo it doesn't mean it's in sync with the owner's repo!

FORKING DarioBoh/ISDS3105_fall

You (forked repo)



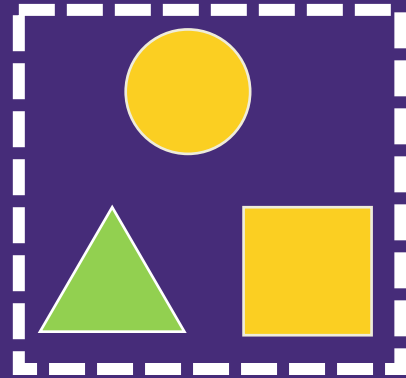
Me (owner)



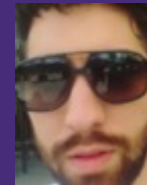
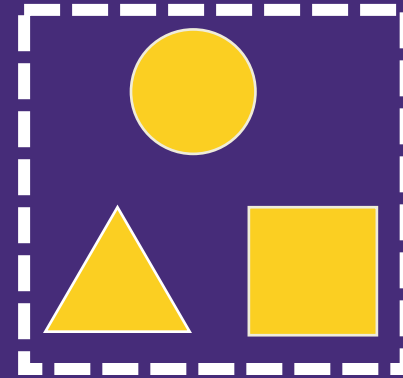
This scenario is possible...

FORKING DarioBoh/ISDS3105_fall

You (forked repo)



Me (owner)



This scenario is also possible...

SINC WITH DarioBoh/ISDS3105_fall

From GitHub documentation
<https://help.github.com/articles/fork-a-repo/>

- 6 Type `git remote -v` and press **Enter**. You'll see the current configured remote repository for your fork.

```
$ git remote -v
origin https://github.com/YOUR_USERNAME/YOUR_FORK.git (fetch)
origin https://github.com/YOUR_USERNAME/YOUR_FORK.git (push)
```

- 7 Type `git remote add upstream`, and then paste the URL you copied in Step 2 and press **Enter**. It will look like this:

```
$ git remote add upstream https://github.com/octocat/Spoon-Knife.git
```

- 8 To verify the new upstream repository you've specified for your fork, type `git remote -v` again. You should see the URL for your fork as `origin`, and the URL for the original repository as `upstream`.

```
$ git remote -v
origin https://github.com/YOUR_USERNAME/YOUR_FORK.git (fetch)
origin https://github.com/YOUR_USERNAME/YOUR_FORK.git (push)
upstream https://github.com/ORIGINAL_OWNER/ORIGINAL_REPOSITORY.git (fetch)
upstream https://github.com/ORIGINAL_OWNER/ORIGINAL_REPOSITORY.git (push)
```

SYNC WITH DarioBoh/ISDS3105_fall



`git pull upstream master`



Your master branch