RStudio
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Version Control
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Practice
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Homework
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Introduction to Version Control with GitHub

Nate Wells

Math 243: Stat Learning

September 1st, 2021

Outline

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- Explore the layout of Rstudio

- Discuss version control with GitHub

- Describe the typical GitHub workflow

- Practice cloning, pulling, committing, and pushing

Section 1

RStudio

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- Advantages of local installation
  - Much more flexibility and customization
  - Can be used after you graduate from Reed

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- These features allow efficient generation of *reproducible* and *redistributable* results

- RMarkdown can be used to create reports, assignments, journal articles, books, and presentations (like this one!)

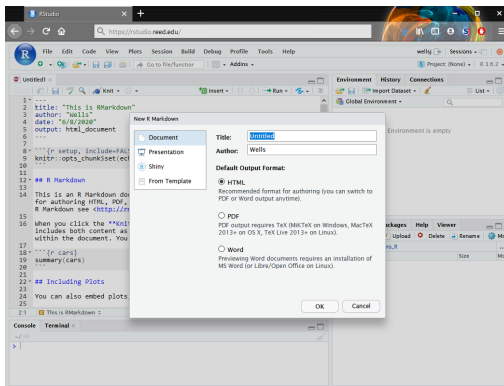- RMarkdown can output a variety of file types: .html, .pdf, .doc, and more

New RMarkdown Files

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Anatomy of RMarkdown

The standard .Rmd file contains three types of content

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Anatomy of RMarkdown

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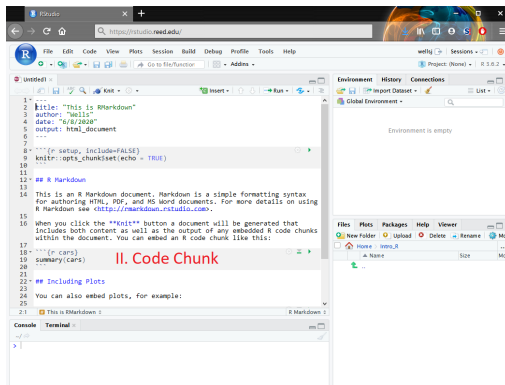1. A YAML header surrounded by `---`

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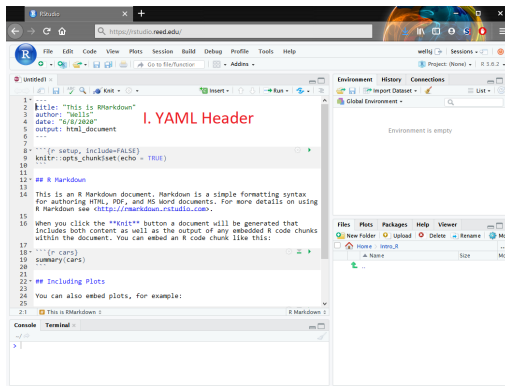
Anatomy of RMarkdown

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2. **Chunks** of R code surrounded by ```

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3. Text formatted with simple markdown syntax like *italics* or **bold**
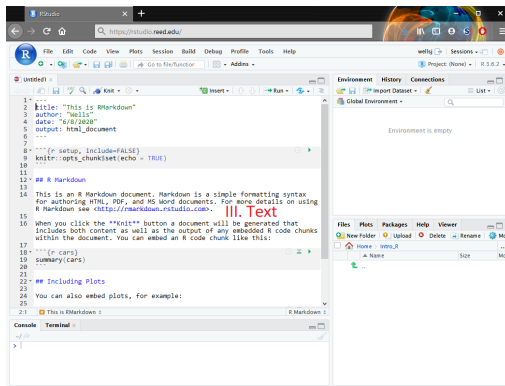
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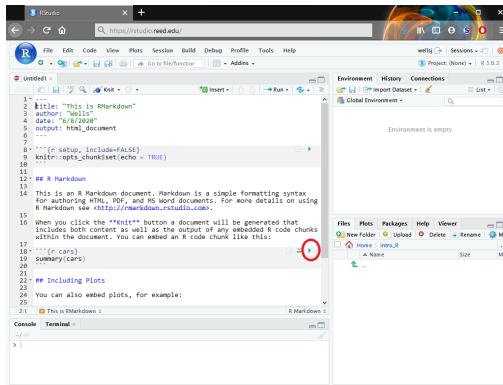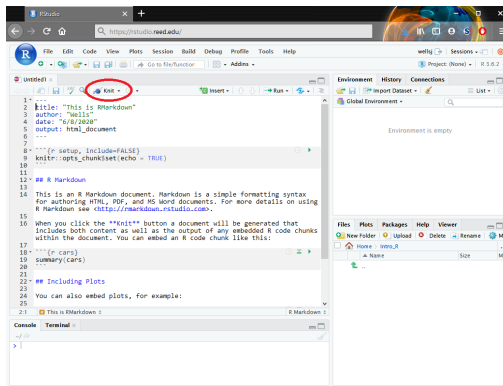
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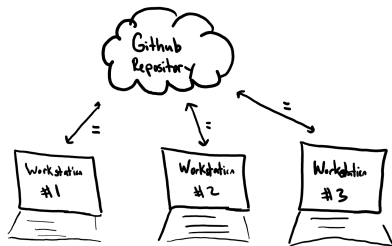
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- Collaborators work independently on their version of the document, and then sync regularly to a common version

Why version control?

There two main reasons you may want to use version control:

1. **Individual Use**. You have a document you will iterate on frequently, that references several other images and/or data sets, or that you want available on multiple devices

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2. **Group Use**. You are collaborating with several other people on a common document, need to synthesize several versions of the document, and comment on changes.
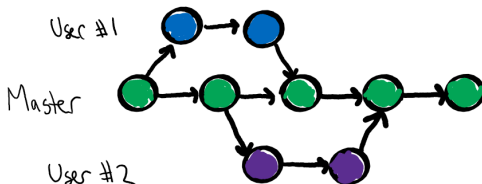
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    - Issue commands in the shell (powerful, but steep learning curve)
    - Use a client, like RStudio or GitHub Desktop (recommended)

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1. Users **clone** the respositories from GitHub to their computer (or to the RStudio server).

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5. After making several commits (and especially when done working for the session), the user will **push** the commits to the GitHub repository.

Section 3

Practice

Working Solo

Follow the instructions on the Working Solo document found under today's class (Wed 9-1) on the schedule page of the course website.

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Section 4

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6. You will receive feedback on the assignment via Pull Request (to be discussed later)