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# Welcome to Week 13 Lecture 1!

Intro to MySQL,  
MySQL Workbench,  
GitHub Desktop,  
& Jupyter Notebooks



# Agenda

- Progress Check & Assignments
- **Today's Topics:**
  - GitHub / GitHub Repositories
  - Using GitHub Desktop
  - Using Jupyter Notebook
  - Using MySQL Workbench - Generating an ERD
  - Walkthrough: Creating an Assignment Repo + Notebook
  - Querying MySQL with Python
- **Thursday's Topics:**
  - Advanced SQL Queries
  - Database Administration
  - Exporting MySQL Databases

# Progress Check

- Local Python Installation.
  - Poll 1:
    - Have you been able to install Python locally and your Setup your dojo-env successfully? [\[Link\]](#)
  - Poll 2:
    - For those that ran into problems installing Python + dojo-env, where did you get stuck? [\[Link\]](#)
- MySQL Server/Workbench
  - Poll 3:
    - Have you been able to install MySQL Server + MySQL Workbench Successfully? [\[Link\]](#)

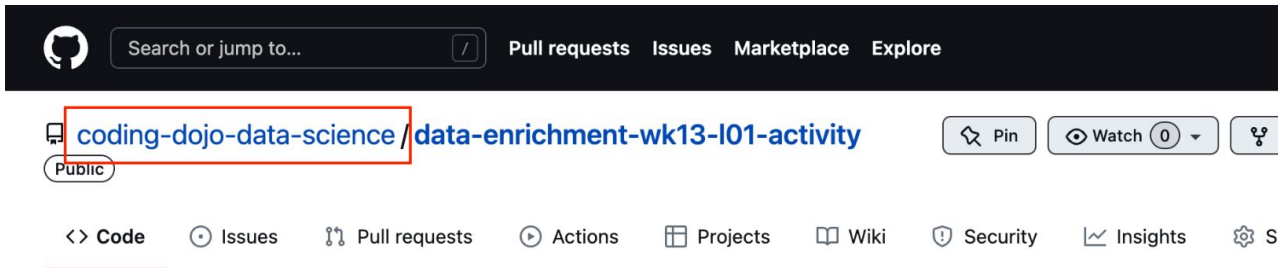
# Assignments

- Core Assignments for this Week:
  - Queries: Sakila (Core)
  - Books (Core)
  - Project 3 - Part 1 (Core)
- Assignment Deadline - This Week:
  - Extended until Sunday night 11:59 PM PST
  - Allows time for installation troubleshooting
  - More lecture time to cover everything needed.

# GitHub & GitHub Desktop

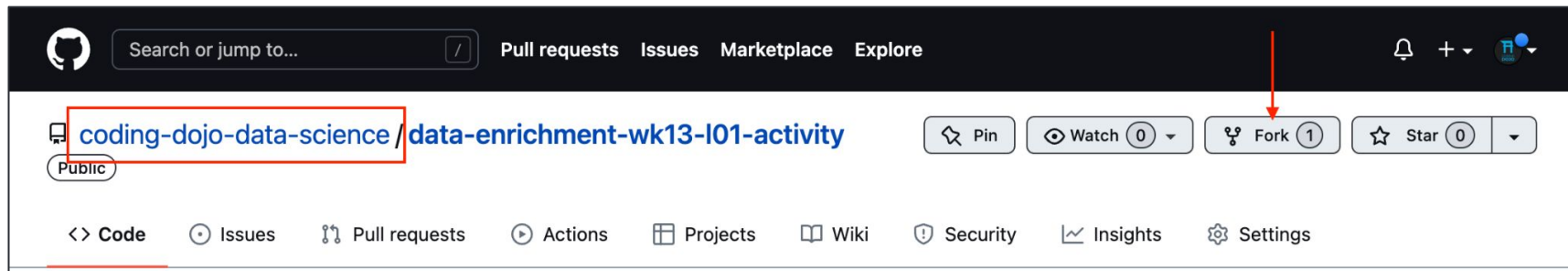
# GitHub Repositories & Version Control

- A GitHub repository is a **version-controlled folder** containing code and related files.
  - By “version-controlled”, we mean that GitHub **tracks every change made to all files within a repository**.
    - **The changes are saved as a snapshot of each file at that point in time, called a “commit”.**
    - This allows us to retrieve any previous snapshot of our work, if we need to.
- **Repositories are owned by a specific GitHub user.** Only that user can change the contents of a repo. In the screenshot below, you can see that [this repo is owned by “coding-dojo-data-science”](#).

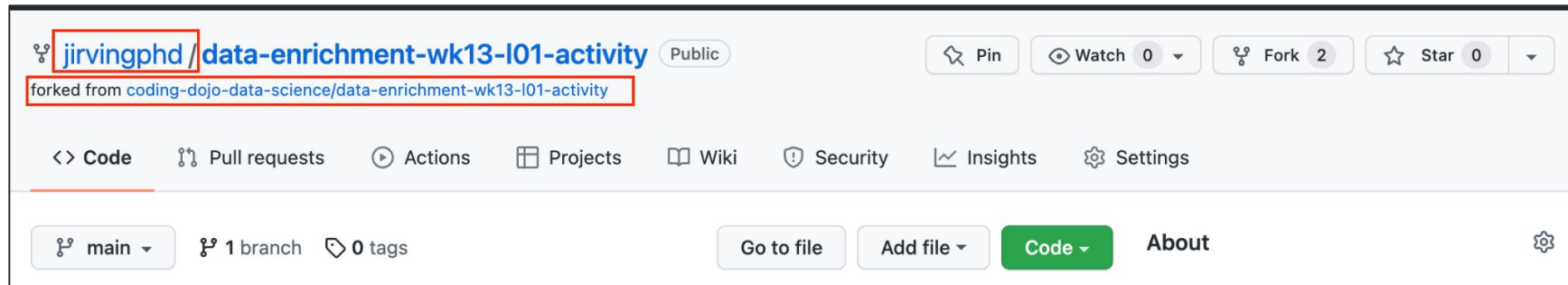


# Forking a Repo

- To Fork a repo, click on the “Fork” button on the repo on GitHub.com



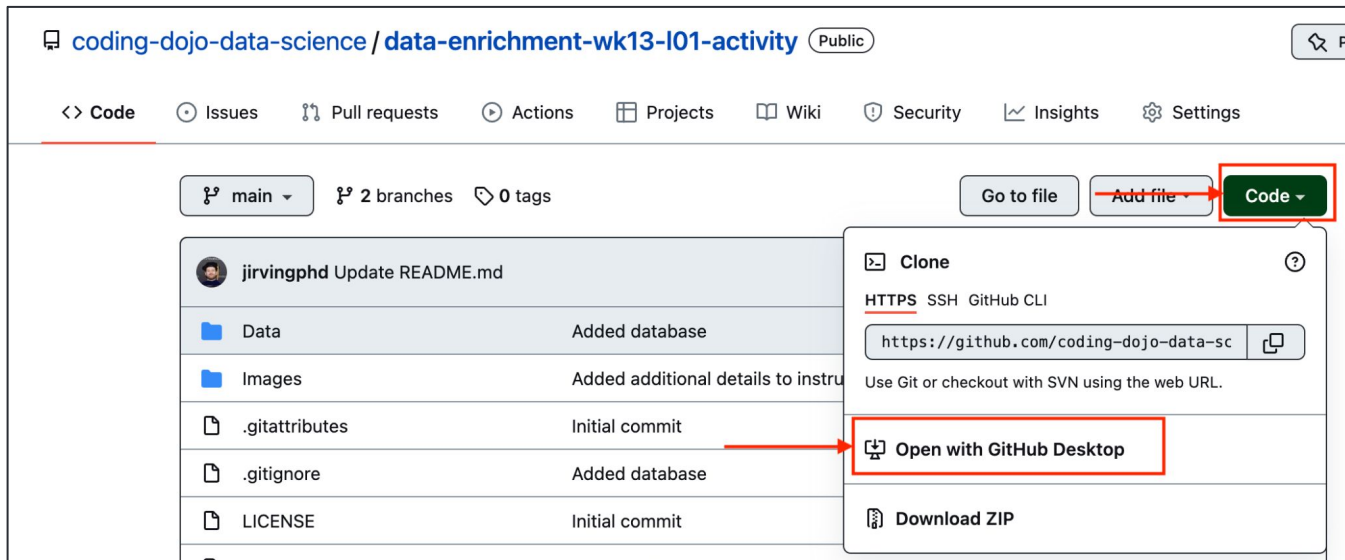
- It will then open a new copy of the repository, but attached to YOUR username. It will also indicate what repository it was forked from.





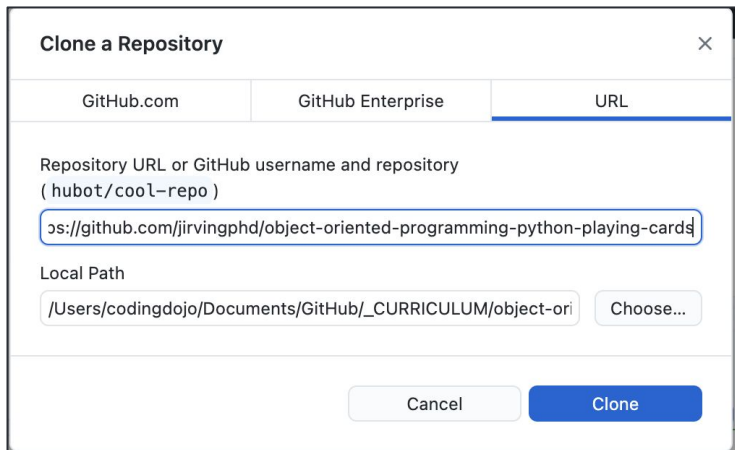
# Opening a Repo Locally - 1

1. Click on green Code button and select Open in GitHub Desktop



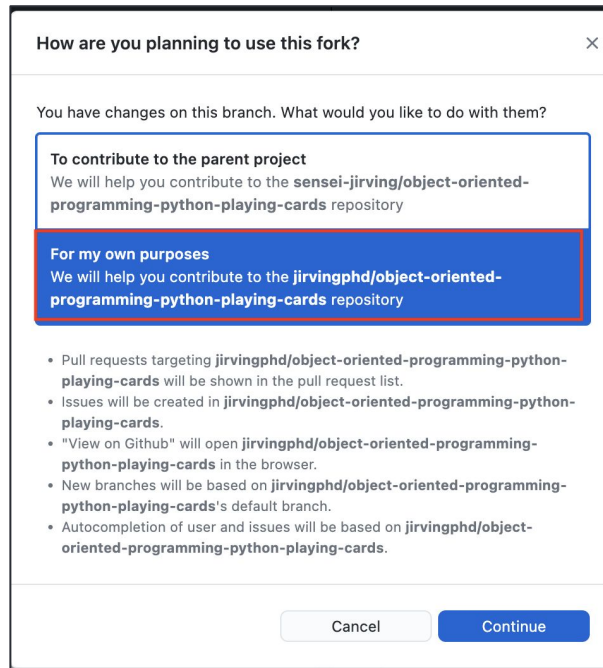
# Opening a Repo Locally - 2

2. Select a folder to clone the repo into and click “Clone”.



The 'Clone a Repository' dialog box is shown with three tabs: 'GitHub.com', 'GitHub Enterprise', and 'URL'. The 'URL' tab is selected. The 'Repository URL or GitHub username and repository' field contains the text 'https://github.com/jirvingphd/object-oriented-programming-python-playing-cards'. The 'Local Path' field contains the text '/Users/codingdojo/Documents/GitHub/\_CURRICULUM/object-ori'. There are 'Cancel' and 'Clone' buttons at the bottom.

2. When asked “How are you planning to use this fork?”. Select “For my own purposes”



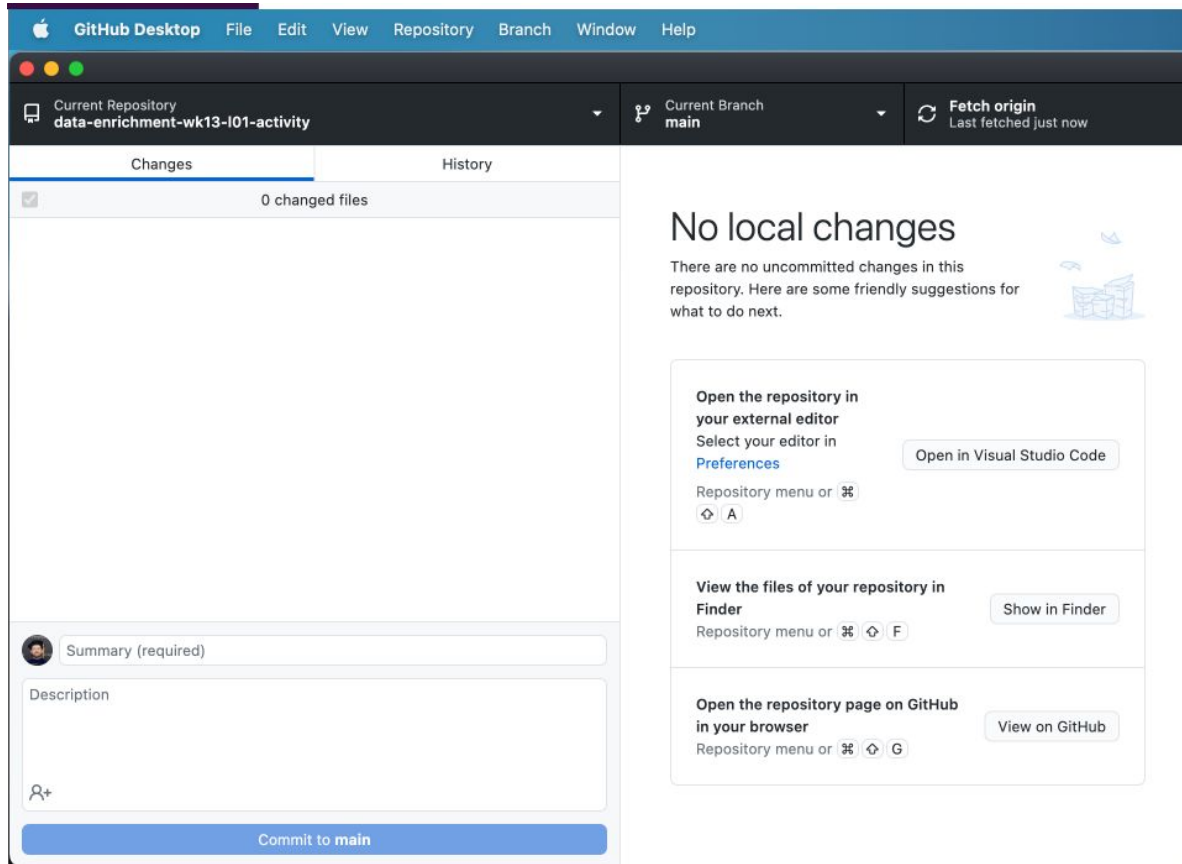
The 'How are you planning to use this fork?' dialog box is shown. It contains the text 'You have changes on this branch. What would you like to do with them?'. There are two main options: 'To contribute to the parent project' and 'For my own purposes'. The 'For my own purposes' option is highlighted with a blue background and a red border. Below these options is a list of bullet points describing the consequences of each choice. At the bottom, there are 'Cancel' and 'Continue' buttons.

**To contribute to the parent project**  
We will help you contribute to the `sensei-jirving/object-oriented-programming-python-playing-cards` repository

**For my own purposes**  
We will help you contribute to the `jirvingphd/object-oriented-programming-python-playing-cards` repository

- Pull requests targeting `jirvingphd/object-oriented-programming-python-playing-cards` will be shown in the pull request list.
- Issues will be created in `jirvingphd/object-oriented-programming-python-playing-cards`.
- "View on GitHub" will open `jirvingphd/object-oriented-programming-python-playing-cards` in the browser.
- New branches will be based on `jirvingphd/object-oriented-programming-python-playing-cards`'s default branch.
- Autocompletion of user and issues will be based on `jirvingphd/object-oriented-programming-python-playing-cards`.

# GitHub Desktop Interface



To Open Repo in Jupyter:


1. Click on the “Repository” menu on the menu bar/top of the window.
2. Select “Open in Terminal”/”Open in GitBash”
3. In the terminal/GitBash window, start jupyter notebook by running: “jupyter notebook” or “jnb” (if you added the alias as shown in step [3. Setting dojo-env as your default](#))

# Jupyter Notebook

# Jupyter Notebook Interface - Files View




 Quit Logout

Files Running Clusters Nbextensions

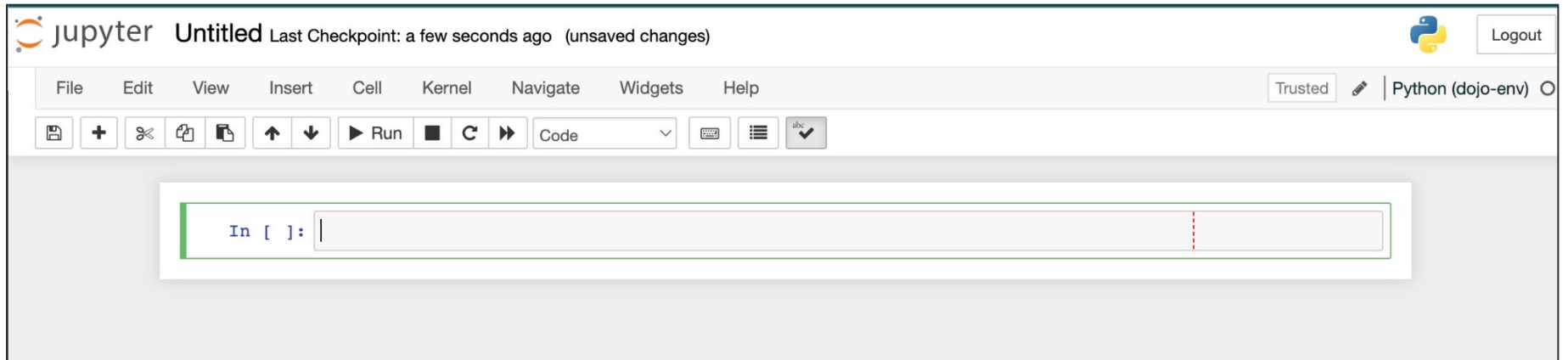
Select items to perform actions on them. Upload New ▾ 

☐ 0 ▾  /

Name ▾ Last Modified File size

<input type="checkbox"/>  <a href="#">Data</a>	2 hours ago	
<input type="checkbox"/>  <a href="#">Images</a>	2 hours ago	
<input type="checkbox"/>  <a href="#">LICENSE</a>	19 hours ago	35.1 kB
<input type="checkbox"/>  <a href="#">README.md</a>	2 hours ago	3.25 kB

# Jupyter Notebook Interface - Editor



# Walkthrough/Activity: Practicing SQL Queries with Python

Using GitHub Desktop, Jupyter Notebook, MySQL Workbench, and PyMySQL Together

# Group Activity Details

- **For today's activity, you are going to be practicing working with GitHub Desktop, Jupyter Notebook, and MySQL Workbench.**
  - Full instructions are in the README:  
<https://github.com/coding-dojo-data-science/data-enrichment-wk13-l01-activity>
  - Brief Summary:
    - Fork and clone the GitHub repository:
    - Open the repo with Jupyter and create a new notebook.
    - Install the Chinook database into your MySQL Server.
    - Use Reverse Engineering in MySQL Workbench to create an ERD for the Chinook database you just installed.
    - Use PyMySQL and SQLAlchemy to perform the correct queries to answer the listed queries.
- **We will walk through the first 4 steps together before we split into breakout rooms.**



# Breakout Group Time!

Get as far as you can working with your group!