
Source

# 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)

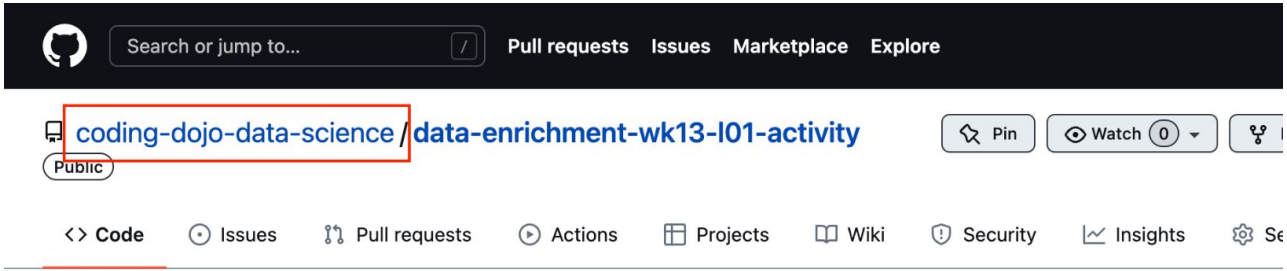
- Assignment Deadline - This Week:
  - Extended until Sunday night 11:59 PM PST
  - Allows time for installation troubleshooting
  - More lecture time to cover everything needed.

# GitHub & GitHub Desktop

# GitHub Repositories & Version Control

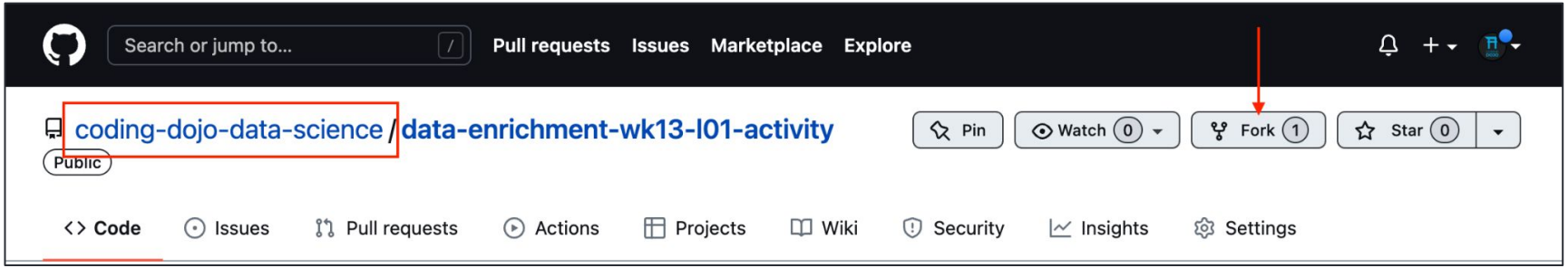
- A GitHub repository is a **version-controlled folder** containing code and related files.
  - By “version-controlled”, we mean that GitHub **tracks every change made to all files within a repository.**
    - **The changes are saved as a snapshot of each file at that point in time, called a** “commit”.
    - 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”.

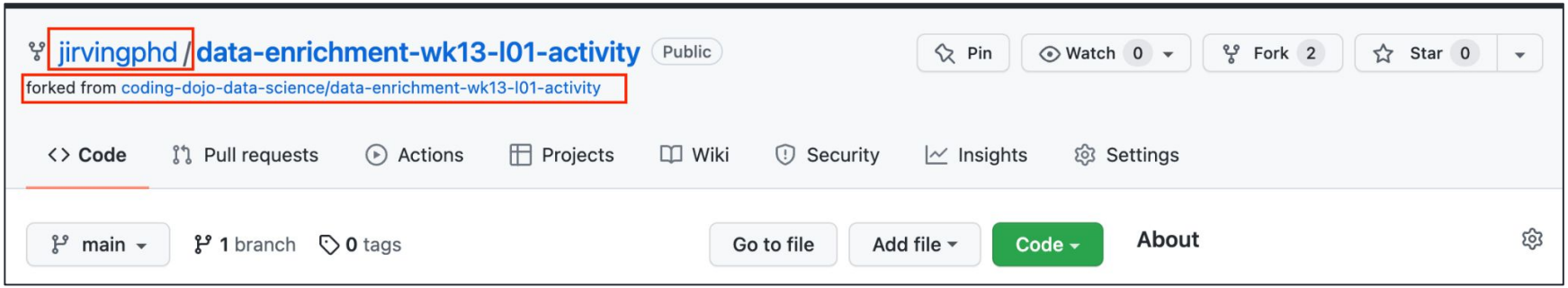


# Forking a Repo

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

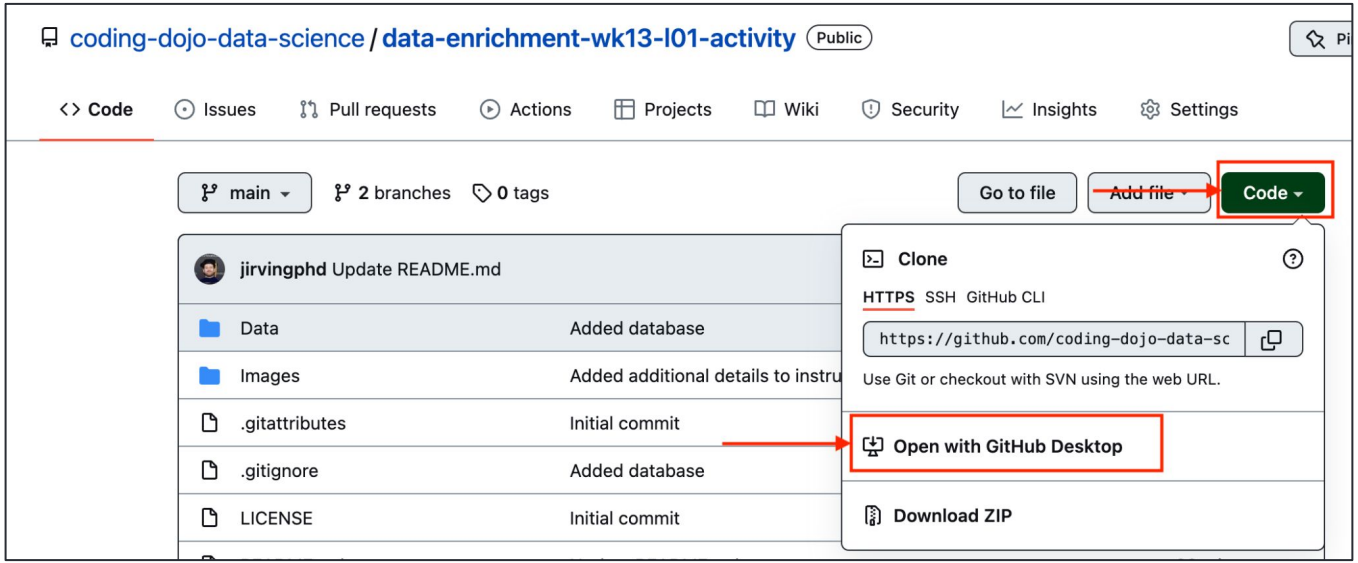



- It will then open a new copy of the repository, but attached to YOUR username. It will also indicate what repository it was forked from.



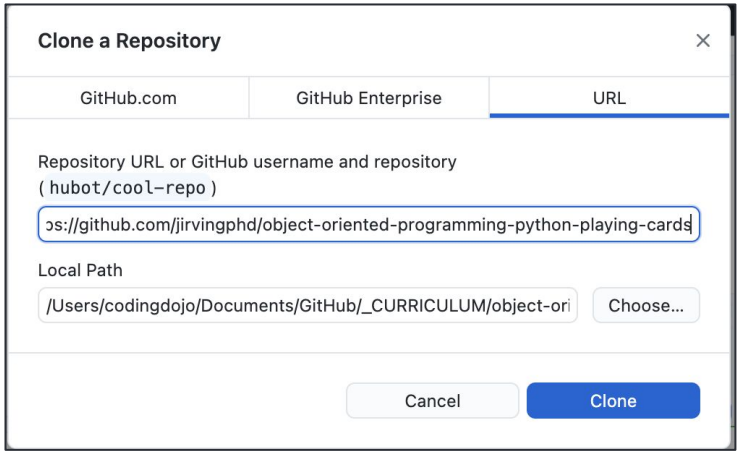
# Opening a Repo Locally - 1

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

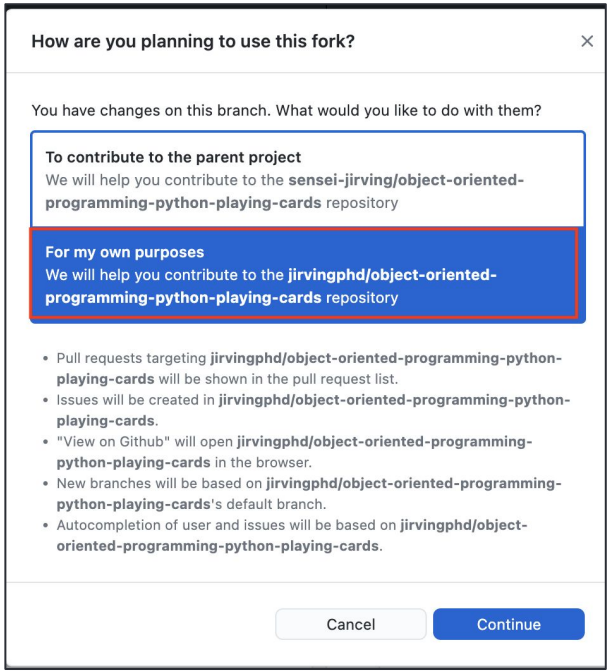


# Opening a Repo Locally - 2

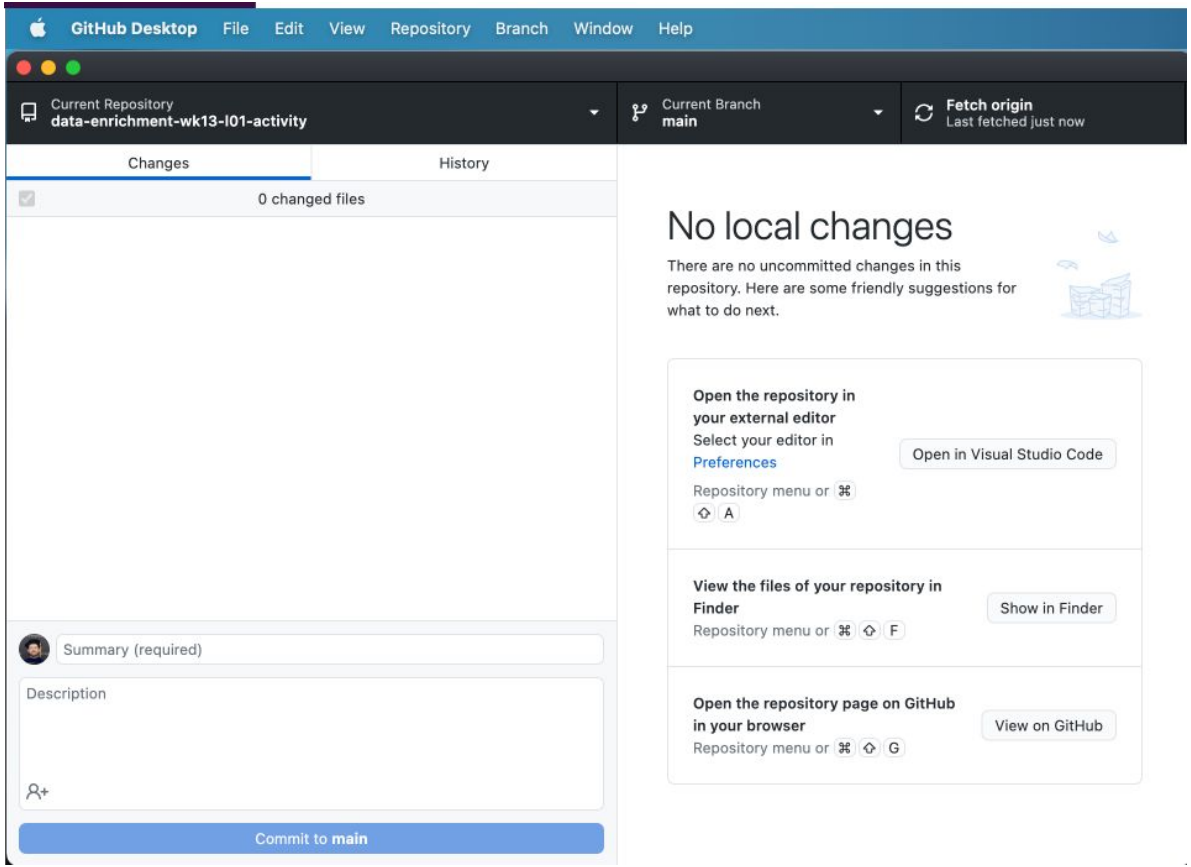
2. Select a folder to clone the repo into and click “Clone”.




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



# GitHub Desktop Interface



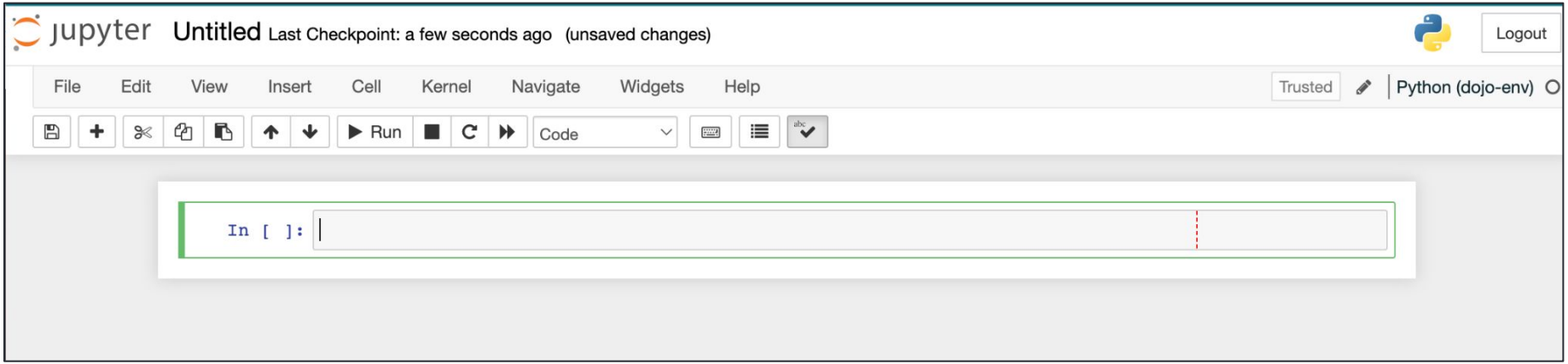

To Open Repo in Jupyter:

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

# 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!