Final Instructions

Welcome Welcome Welcome. You made it this far and you should be proud of all the hard work you have put into this class. 👏👏👏

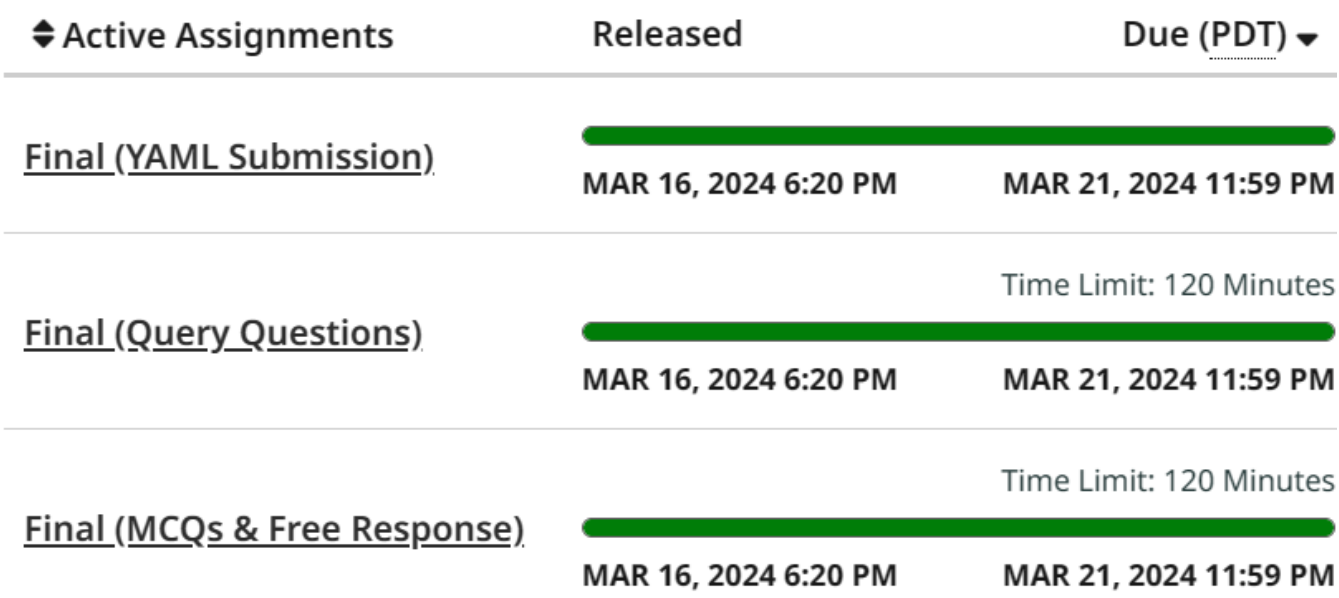
This final exam is a culmination of that hard work and if you have been sticking with the class thus far then I have complete confidence in your ability to do well on this exam. Please **read all** of the following instruction all the way through so you understand how the final works. It is very similar to the midterm.

> **Remember**
>
> Once the exam starts **do not** ask any questions on piazza or edstem both public and private, unless there is a technical issue that you have documented. The exam is asynchronous and I cant answer any questions or make clarifications for students if other students have submitted the exam already. Thank you. :)

> **Warning**
>
> You must **work alone** on the final, this includes all parts. You may not use ChatGPT or other LLMs to solve the problems for you. You may not use internet forums like StackOverflow or Github forms.
>
> **Approved Resources**: lecture slides/demos, notes, discussion section materials, piazza posts from our class, the suggested textbook, an instance of `sqlite3` and or `psql` or any official online documentation for the tools we are using (e.g. sqlite3, or postgresql)

On Gradescope, you will see three active final exam assignments:

note the due dates might be different!



Final (MCQs & Free Response)

- This section is completely done on Gradescope, you will have 120 continuous minutes to complete it once you start
- Here is the breakdown of questions:
  - 20 comprehensive multiple choice questions (1/2 point each)
  - Schema Design portion (worth 7.5 points)
  - Normalization portion (worth 7.5 points)
- This portion can be done separate from the Query questions below

Final (Query Question) and (YAML Submission)

- This section is completely done on your local computer, but submitted to the autograder on Gradescope
- You will have 120 continuous minutes to complete it once you start
- You will submit Relational Algebra queries and PostgreSQL queries to the autograder
  - There is one autograder that will check your your SQL and RA
- There will be a Gradescope "Assignment" called **Final (Query Questions)**. Once you open this assignment to get the questions, your time will start. You do not have to submit anything to this assignment.
- You will work on your queries and submit your `final.yaml` file to **Final (YAML Submission)**.
  - Note that you only have **THREE** submission attempts.
  - You will submit the RA and SQL queries in the same `yaml` file
- We will compare your start time of **Final (Query Questions)**, with the submission times to **Final (YAML Submission)** to ensure you are under the 2 hour mark.
- Any submission later than 2 hours **will not be accepted** and your last submission before the 2 hour limit will be considered as your final submission.

- For incorrect queries, we will grade them manually for partial credit.

> **Remember**
>
> Check your syntax (e.g. use a yaml validator, and RELAX to check your RA syntax as well). Do not burn a submission for a silly syntax error!!

> **Important**
>
> 1. Make sure you have a stable internet connection before taking this section
> 2. Ensure that you save the assignment intermittently so that if you face any connectivity issues, you can go back to your saved assignment and continue the test
> 3. If there is an issue with the submission or you lose internet connectivity, take a screenshot and send an email to us ASAP

Query Question Point Breakdown

SQL Queries:

- Query 1 = 4 points
- Query 2 = 4 points
- Query 3 (multipart) = 14 points

RA Queries:

- Query 1 = 1 point
- Query 2 = 2 points
- Query 3 (BONUS) = 2 points bonus

Data and Submission File for the RA and SQL Queries

RA Test Data (we have a larger one that we will grade you on): supplier_parts_small.txt
SQL Data: movies.sql
Submission File: final.yaml

Importing data into pgAdmin

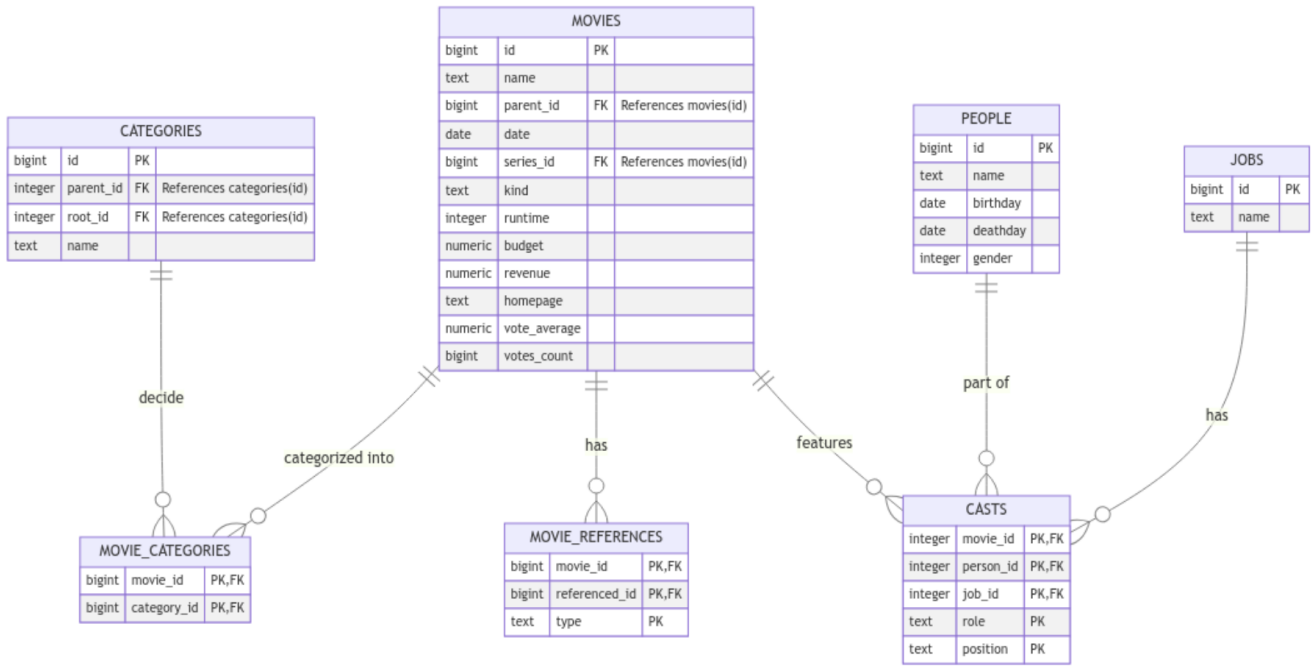
1. **Create new database**
   - Right click Local PostgreSQL and select create databse
   - Give the database a name
2. **Load the data**
   - Right click on the newly created database and open the PSQL tool

- Run the command `\i <file_path>`
  - MacOS: your file path should look like `/Users/<your_username>/Downloads/movies.sql`.
  - Windows: change the path from `"C:\Users\<your_username>\Downloads\movies.sql"` to `C:/Users/<your_username>/Downloads/movies.sql` (removing quotes and changing the direction of slashes)

Help

- When you are in the PSQL tool and want to run any terminal commands, you need to put `\!` before it e.g. if you want to print current directory (Mac: `\! pwd`) (Windows: `\! echo %cd%`)
- If you want to change directory in PSQL terminal, command is `\cd`

movies.sql schema



supplier_parts schema

Suppliers

sID	sName	address
1	supplier1	123 main street
2	supplier2	456 oak avenue
3	supplier3	789 pine lane

Parts

pID	pName	color
101	part1	green
102	part2	orange
103	part3	green
104	part4	red
105	part5	purple

Catalog

sID	pID	price
1	101	6.99
1	102	15.49
1	103	12.99
3	102	14.25
3	103	9.99
2	105	10.22

How to Prepare Before You Begin

1. **Download Files**:
   - Download the above Database files for both SQL and RA
   - Download the yaml submission file
2. **Prepare your environment:**
   - Open RELAX, a SQL validator and a yaml validator tab to check syntax
   - Create your database in RELAX for the RA queries
   - Create your PostgreSQL database for the imdb data
   - Review the imdb schema so you know what the data looks like before you begin!

> ⚠ **Warning**
>
> - You only have **3 submissions** to the autograder, so use them wisely.
> - We will have the exact time you access the query questions, so we can track if you submit after the 120 minute time limit. We will only consider submissions that occur within 120 mins of the start time of **Final (Query Questions)**

> **Important**
>
> - We have designed this flexible schedule keeping in mind potential life constraints you might encounter. To support your planning, we will provide exact exam dates well in advance.
> - With this flexibility, please understand that we will not accept late submissions for the final, except in exceptional, documented circumstances that are beyond your control (e.g., an auto accident, severe illness, family emergencies, etc.).

- Best of Luck!