CIS 5500: Database and Information Systems

DataGrip Installation and Setup Instructions

1. Introduction

This handout provides installation and setup instructions for DataGrip, an IDE for databases used over the span of this course - for both programming assignments and the project. More specifically, this document describes the processes for:
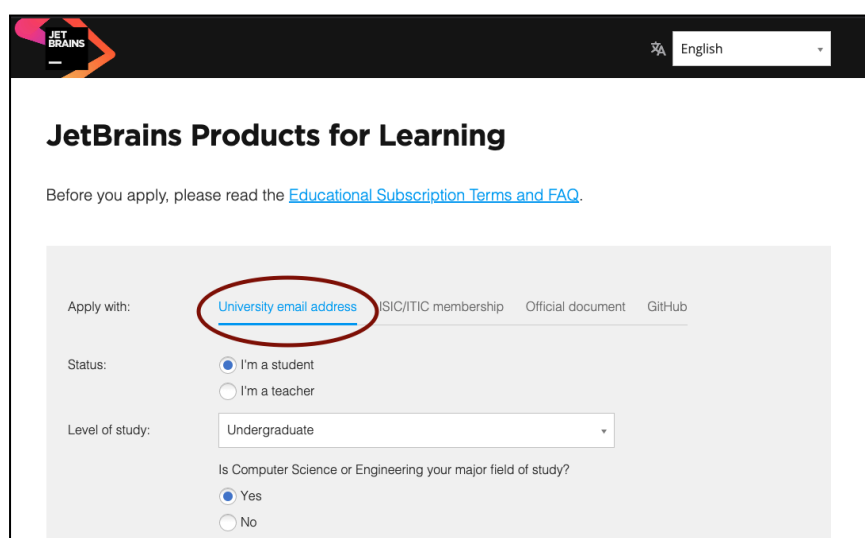
- Acquiring a JetBrains educational license
- Downloading and installing DataGrip
- Setting up drivers for Oracle, MySQL, and Mongo
- Connecting to data sources
- Editing and running queries

If you already have a version of DataGrip downloaded, skip to section 4

Note: This guide is meant to serve as a general reference - minor changes in steps might arise due to updates from the publisher or due to differences in specific devices/operating systems. If online resources fail to help, you may ask a member of the course staff for assistance.
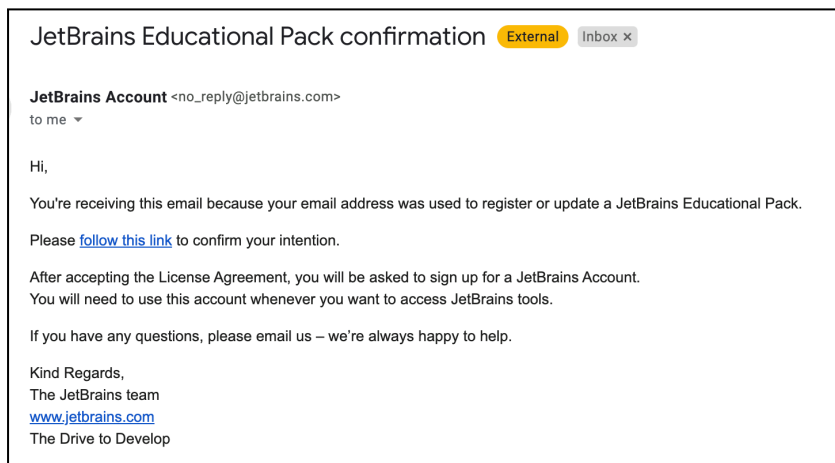
2. Acquiring a JetBrains Educational License

Students from accredited educational institutions are able to apply for an individual license for all JetBrains IDEs. We suggest applying here under the "*University email address*" option, **using your Penn email:**
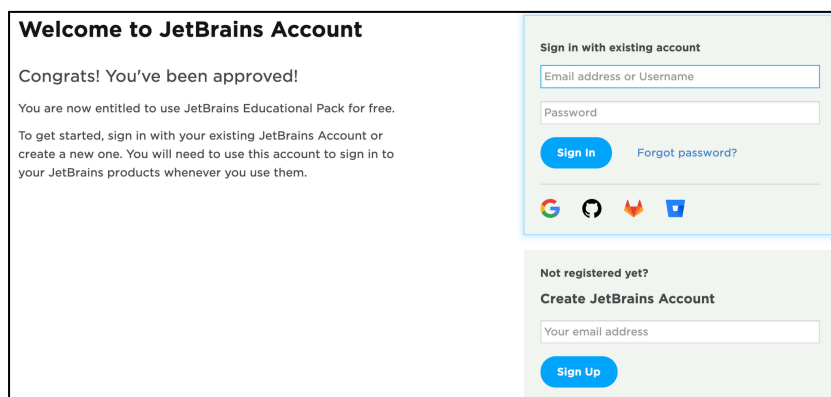
You should receive a confirmation email with the title "*JetBrains Educational Pack Confirmation*":

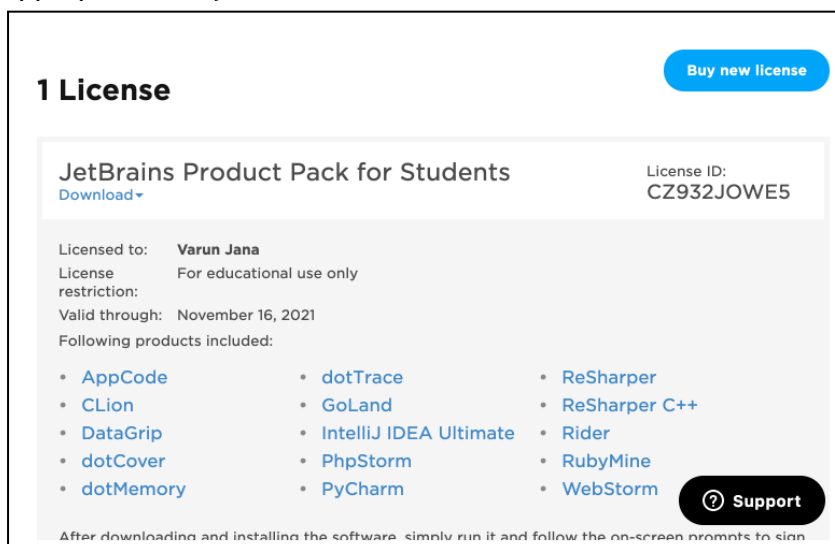Click on "*follow this link*", follow and approve any additional prompts upon redirections, finally landing on the welcome page. Create a JetBrains account, if you do not already have one and sign in.

You will also receive a License confirmation in this process.

3. Downloading and Installing DataGrip

Once signed in, visit the licences page to view your licence and download the version of DataGrip appropriate for your device:
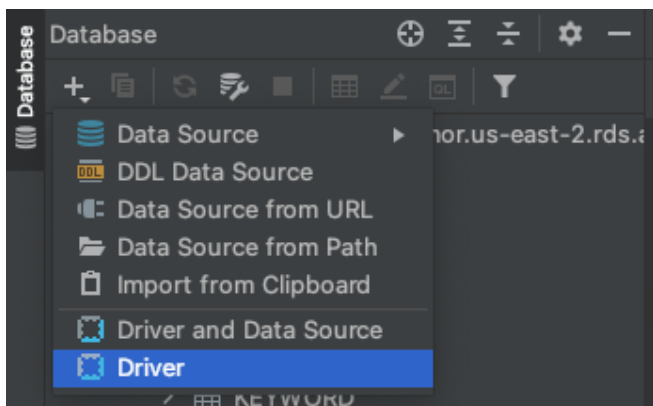
After installation, you will be asked to log in to your JetBrains account. Upon successful authentication, your license will automatically be attached to the installed copy of DataGrip. This concludes the installation of DataGrip.

4. Setting up Drivers for Oracle, MySQL, and Mongo

Note: DataGrip also allows you to automatically download and install recommended drivers when setting up connections to databases. While we recommend installing them now, it is also possible to do so later.
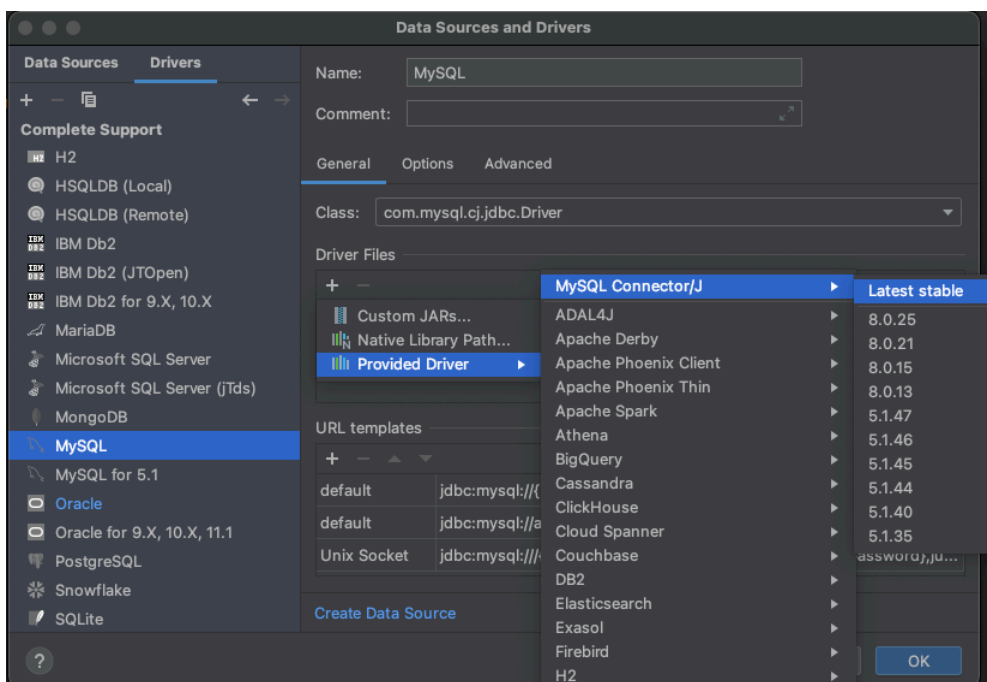
Once you have created and opened a new project in DataGrip (a prompt will automatically ask you to do so), click the '+' icon on the top left corner, just below 'Database' and select 'Driver':

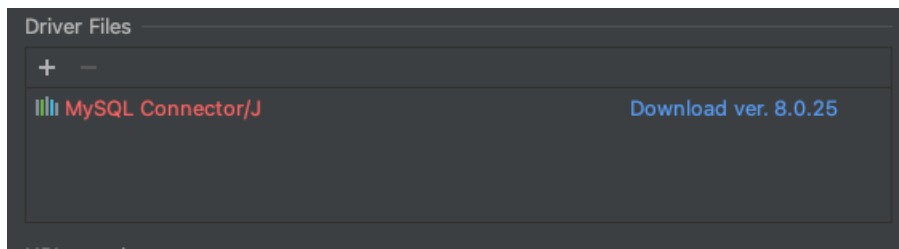This will bring up the drivers menu. The drivers for all three platforms (MySQL, Oracle, and MongoDB) can be found on the left pane under the "Complete Support" heading.

4a. Installing the driver for MySQL

Select 'MySQL' and then click the '+' icon under 'Driver Files'. Install the 'Latest stable' driver from 'Provided Driver' → 'MySQL Connector/J' → 'Latest Stable' as shown in the image below:
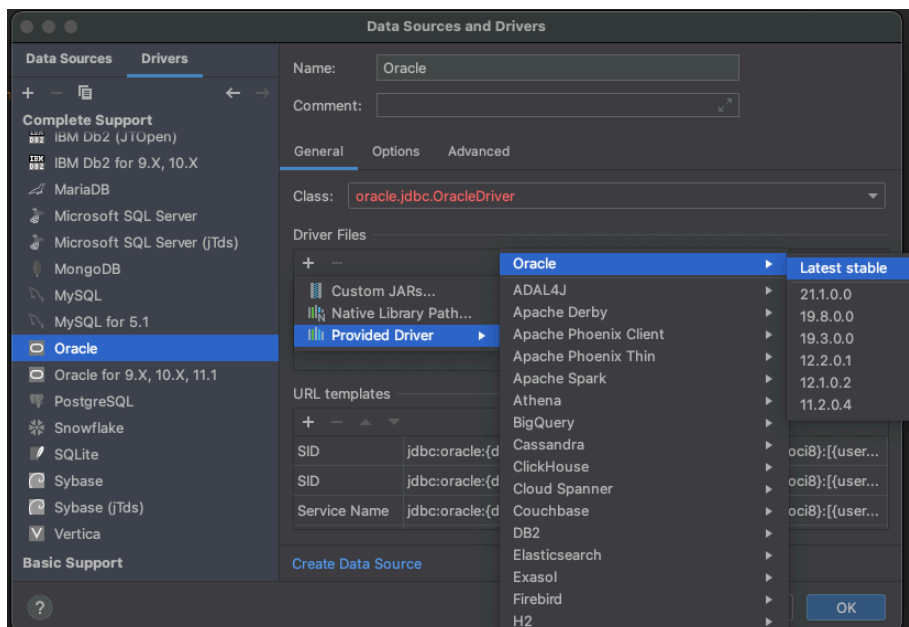
Download this driver by clicking on 'Download ver. …' or 'Switch to ver. …' (whichever option is available)

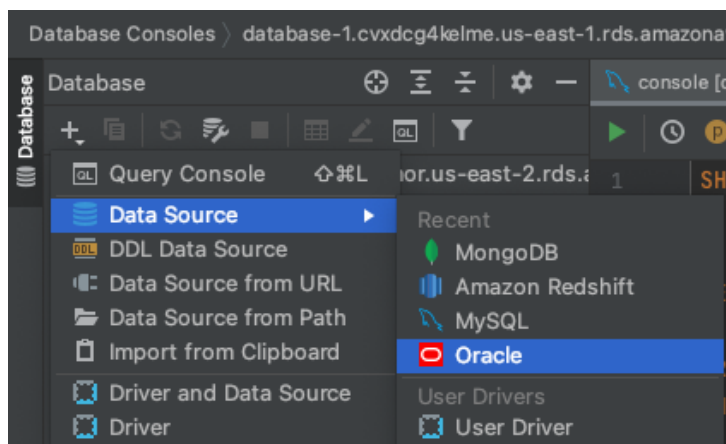Click 'Apply'.

4b. Installing the driver for Oracle

Similar to the MySQL driver above, install the latest stable driver for 'Oracle' from 'Provided Driver' → 'Oracle' → 'Latest Stable' as shown in the image below. Then download the driver and click 'Apply'.
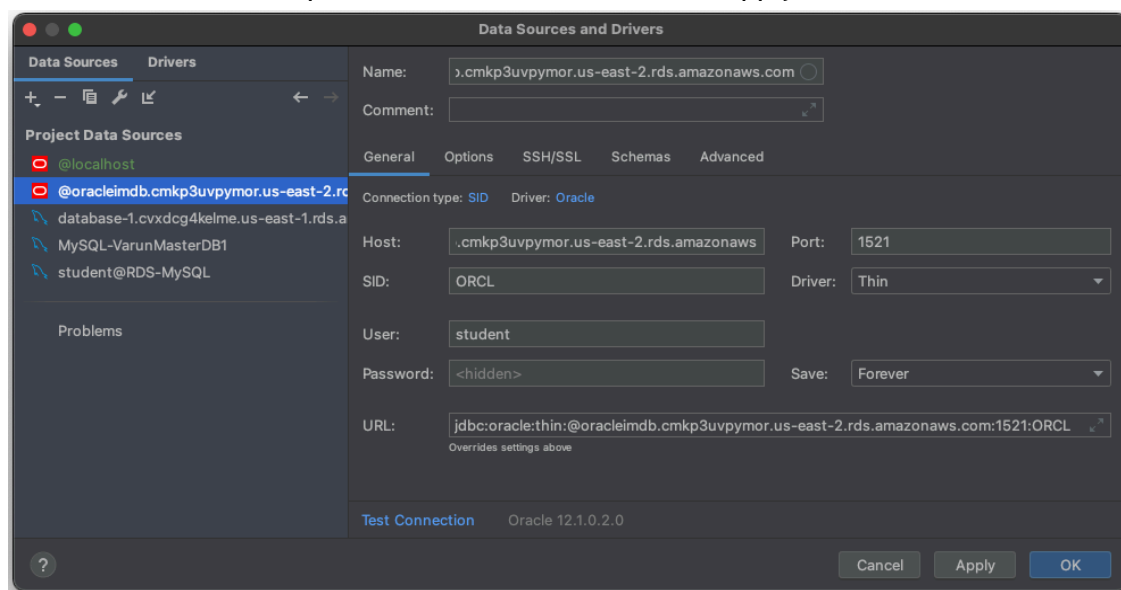

5. Connecting to Data Sources

This section provides instructions on connecting to the Oracle instance set up for Part 1 of Homework 1, but can be extended to other data sources as well. For instructions on connecting to the RDS MySQL instance you set up in HW1 Part 2, refer to the AWS RDS handout.

1. Once you have the correct drivers installed, click on the '+' icon on the top right, just under 'Database'. You will be able to select the data source type from the 'Data Source' menu (under either the 'Recent' or 'Complete Support' header). Select the option for 'Oracle' for HW1 Part 1.

2. This will bring up the data sources and drivers connection prompt. You will notice that the fields default to localhost[1], but since the instance in this example runs on the cloud, use the connection details provided below and then click 'Apply':

Connection Details:

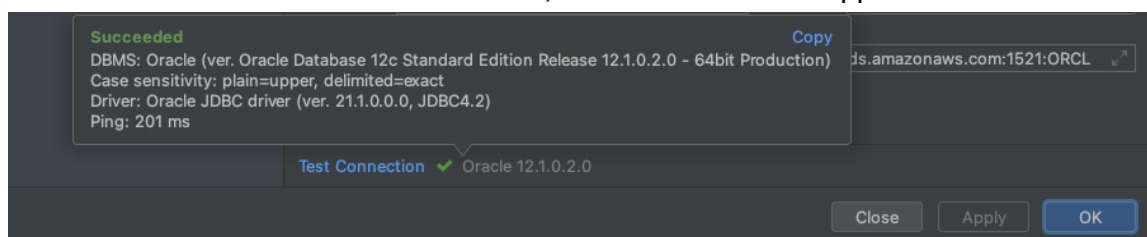Host: oracleimdb.cmkp3uvpymor.us-east-2.rds.amazonaws.com
SID: ORCL
User: student
Password: weakpassword
Port: 1521

Hit 'Test connection' and if all went well, a success toast will appear:

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[1] Server applications for Oracle and MySQL can also be installed locally on your machine, in which case they run on localhost

Note that parameters vary by host platform (for example, SID, or service ID, is unique to Oracle hosts, and MySQL hosts do not need this).

Note: Before being able to run queries on the newly connected Oracle instance, you must first run the command every time you open a new session (assume that a new session is created every time you open DataGrip):
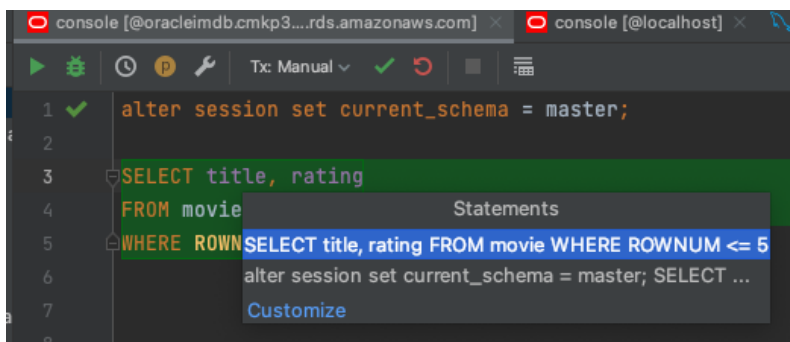
alter session set current_schema = master;

on the console in Section 6. This is specific to the Oracle instance that is used in HW 1 Part 1. You do not need to run this for other sources.
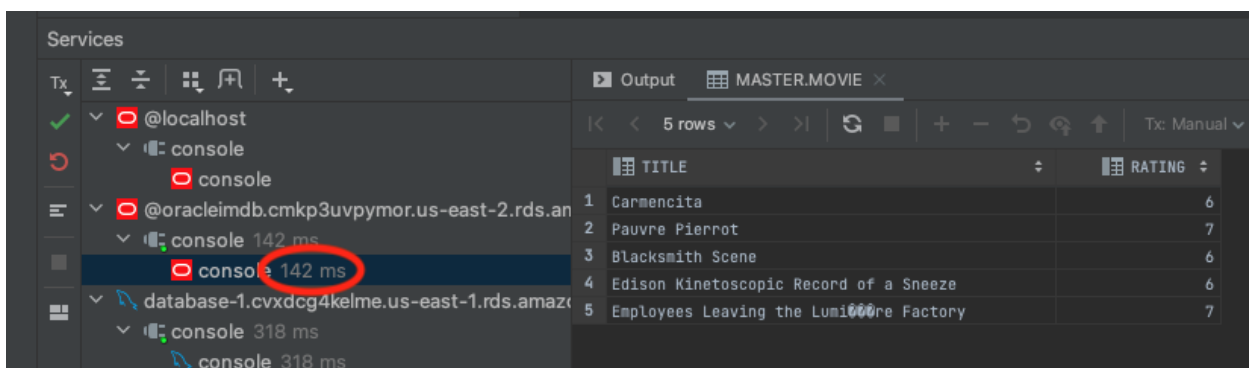
6. Editing and Running Queries

Once you click 'OK' on the data source wizard from Section 5, an editor console corresponding to the data source will be created. You may enter and execute queries here.

Once typed, commands or queries can be run by clicking on the '▶' button at the top left of the editor console and selecting the appropriate statement to run. You may find the shortcut, Command + Return (on MacOS) or Ctrl + Enter (on Windows) handy.

After any query is successfully executed, the output of the query is displayed below, and the runtime of the query (142ms in this case) can also be seen on the 'Services' pane on the left, under the corresponding data source entry:

For the Oracle connection set up in Part 5, you may run the query:

SELECT title, rating
FROM movie

WHERE ROWNUM <= 5;

… and check the output to be the same as in the figure above. Note that runtimes might vary slightly between executions!

7. Troubleshooting

You should try to use internet resources such as the official documentation or Stackoverflow to solve setup issues. If these resources do not solve your problem, you can ask the course staff for assistance via Ed or by coming to OH. We will also keep FAQs posted on Ed.