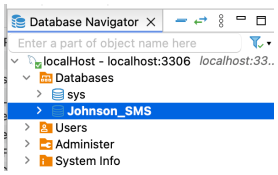
CSc3350: Software Development Lab4

1. Open dBeaver and create a connection to the MySQL database engine. HOW TO: https://dbeaver.com/docs/dbeaver/Create-Connection/
2. Open a SQL script window to use for running the SQL Script files. HOW TO: Highlight your new connection I.E., 'localHost – localhost:3306'
    a. Right click (Mac: <CTRL>-Click) to a pop-up menu: 'SQL Editor'
    b. Click 'SQL Editor' and then 'New Script'
    c. Press enter and now you have a scripting window for execution of SQL queries to MySQL.

3. Create a database named: '<lastname> _SMS' replace '<lastname>' with correctly spelled lastname, e.g., 'Johnson_SMS' is my database. This is done by typing the 'Create Database' <lastname>_SMS command into the SQL Editor window and running. Alternatively, you can use the GUI and Right-click in the Navigator (left side) and select 'Create Database'.

4. Set your new database as the 'default' database in dBeaver.
    a. Right click (Mac: <CTRL>-Click) on your new database in 'Database Navigator' (left) pane. (for me it is 'Johnson_SMS')
    b. Click 'Set as default'
    c. You should see something like this where your database is in **BOLD**:



5. Write and ***run*** an SQL command script to create a new table called 'students' that contains these following columns:
    a. stu_id INT (Make it not null and primary key)
    b. firstname VARCHAR(255) (Student's first name)
    c. lastname VARCHAR(255) (Student's last name)
    d. classify VARCHAR(20) (Student's classification.)
    e. address VARCHAR(255) (Student's mailing address in US)
    f. city VARCHAR(35) (Student's US city)
    g. state CHAR(2) (Student's US state abbreviation)
    h. zip VARCHAR(15) (Student's US zip code allowing for dash '-' and 4-digit code)
    i. dept_id VARCHAR(4) (Department code where the student's major is declared)
    j. Start like I did in dBeaver editor:

```
CREATE TABLE students (
   stu_id int NOT NULL PRIMARY KEY,
   firstname varchar(255) DEFAULT NULL,
   lastname varchar(255) DEFAULT NULL,
   classify varchar(20) DEFAULT NULL,
   address varchar(225) DEFAULT NULL,
   city varchar(35) DEFAULT NULL,
```

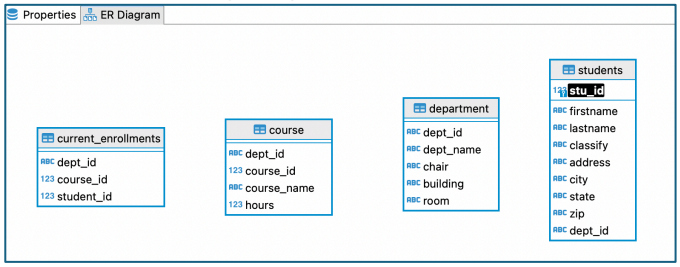
6. Run the script by clicking the 'multiple script file' icon shown here:

7. Write and ***run*** an SQL command script to create a new table called 'department' that contains these following columns:
    a. dept_id VARCHAR(4) (Make it not null)
    b. dept_name VARCHAR(32) (Name of the department)
    c. chair VARCHAR(256) (Name of the chair)
    d. building VARCHAR(32)
    e. room VARCHAR(32)

8. Write and ***run*** an SQL command script to create a new table called 'current_enrollments' that contains these columns:
    a. dept_id VARCHAR(4)
    b. course_id INT (Course the student is enrolled in)
    c. student_id INT (Student enrolled in the course)

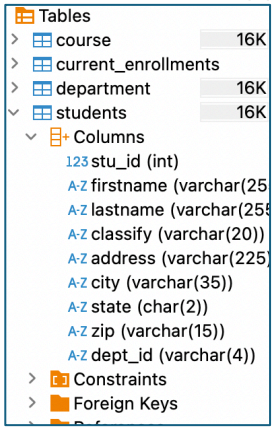
9. Write and ***run*** an SQL command script to create a new table called 'course' that contains these following columns:
    a. dept_id VARCHAR(4)
    b. course_id INT
    c. course_name VARCHAR(255) (Name of the course)
    d. hours INT (Number of credit hours the course carries)

10. These are the new tables viewed from dBeaver's 'View Diagram' option. This is the dB Schema. (Right click on database name in the navigator.)



Note: we do not have any primary/foreign key connections among the tables. Sometimes dBeaver will show 'virtual' links.

    a. each individual table's column listing (4 tables). Example for table students:



    b. Upload five (5) images (4 tables, one dB Schema diagram) to be graded. You can put combine all in a word or PDF file or upload individually as images. Only .PNG, .JPEG, .WebP, .Docx, .PDF are accepted.

11. Run the script file in dBeaver to populate the tables: Lab4_Create_Datum.sql
No need to check data, just preparing for a future lab.