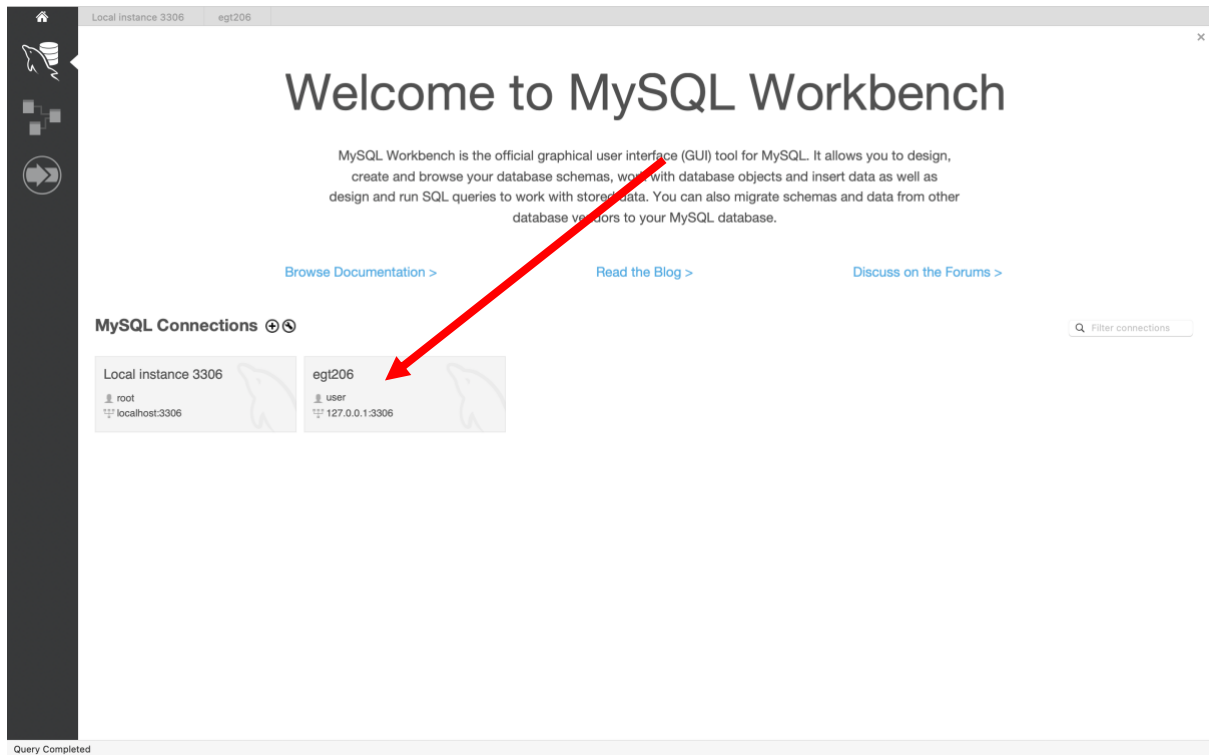


## Module: EGT206 Data Management

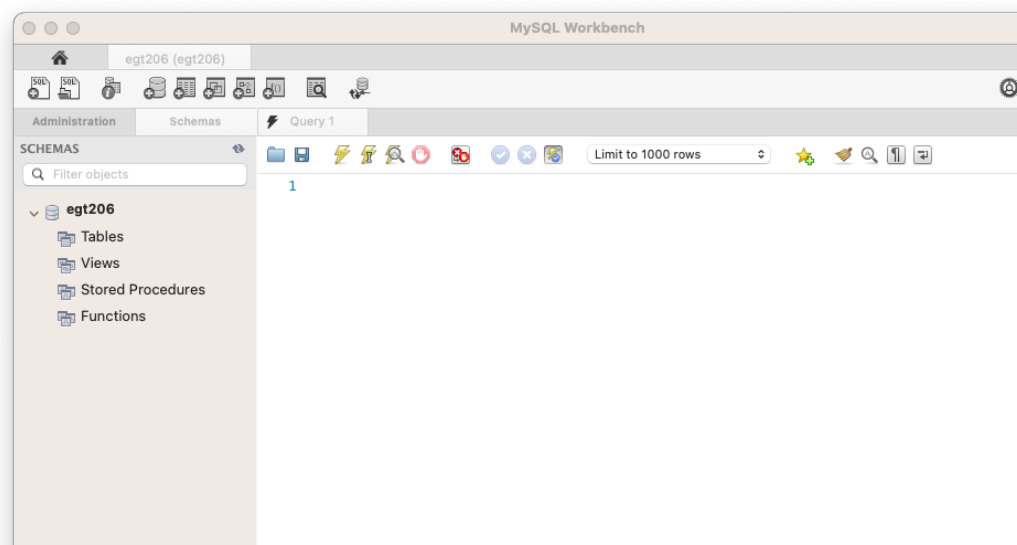
### Practical 5: Hands on SQL

#### Activity1: Create Database using SQL

1. Start the MySQL connection you have created in Practical 4.



2. You should see a database/schema named egt206, which we have created earlier.



3. You can create one more database using following SQL command.  
CREATE DATABASE egt206\_StudentDB;

4. Click the lightning icon to execute the statement.



The first lightning icon ⚡ will execute the selected statement, or all statements if there is no selection. The second lightning icon with cursor ⚡ will execute the statement where the cursor is.

5. You will be able to see if the command is executed successfully at the output console.

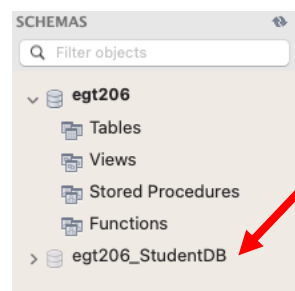
Error will be shown like this:

Action Output				
	Time	Action	Response	Duration / Fetch Time
✖ 1	16:23:05	CREATE DATABASE...	Error Code: 1044. Access denied for user 'user'@'%' t...	0.00020 sec

If you see the green tick, it means the SQL command has been successfully executed.

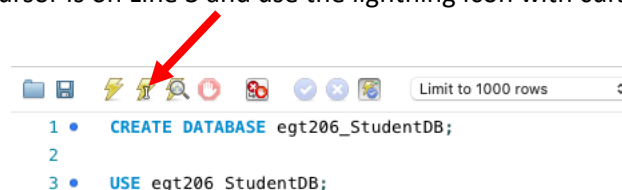
Action Output				
	Time	Action	Response	Duration / Fetch Time
✖ 1	16:24:46	CREATE DATABASE...	Error Code: 1044. Access denied for user 'user'@'%' t...	0.00017 sec
✔ 3	16:24:57	CREATE DATABASE...	1 row(s) affected	0.0022 sec

6. Click the refresh button at “schemas” tab, and you should see the new database in the list.

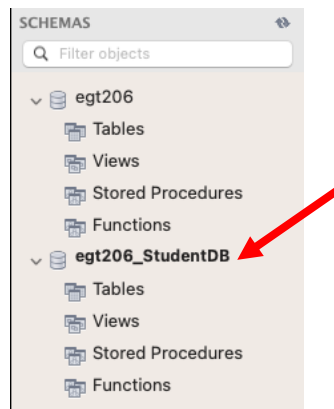


## Activity2: Create a Table for the chosen database using SQL

1. When you have multiple databases, you need to specify which database to use. You can do so using the following SQL command.  
USE egt206\_StudentDB;
2. Make sure your cursor is on Line 3 and use the lightning icon with cursor to execute the statement.

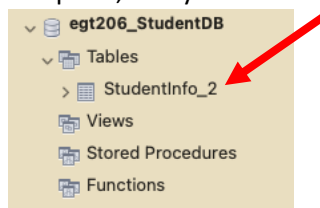


3. You will see that the database name appears in bold, in “schemas” tab. This means that the database is now chosen, for queries.



4. Type the following SQL statements in query.  

```
CREATE TABLE StudentInfo_2  
(  
    ID varchar(10) NOT NULL,  
    Name varchar(50) NOT NULL  
);
```
5. Refresh the schema and you should see a small arrow appears beside “Tables” under the chosen database. Click the arrow to expand, and you should see the created table.

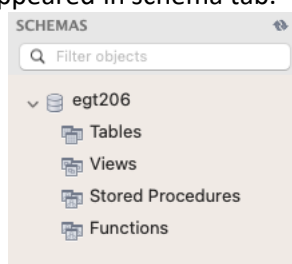


### Activity3: Remove Table and Database using SQL

1. Try removing the table you have created just now using this syntax:  

```
DROP TABLE <tablename>
```

  
You should see the table removed from your database in schema tab.
2. Now, drop the database “egt206\_StudentDB”.  
You should see the database disappeared in schema tab.



## Activity4: Create a New Database and its Table using SQL

1. Create a new database egt206\_prac5DB and select it for queries.

- `CREATE DATABASE` egt206\_prac5DB;

2. Create the following.

- `USE` egt206\_prac5DB;

Table name: StudentDetails with the following fields.

AdmNo

Name

Gender

Address

HandPhoneNo

DateOfBirth

NumOfSiblings

- `CREATE TABLE` StudentDetails  
(  
AdmNo `varchar(7)` `NOT NULL`,  
Name `varchar(20)` `NOT NULL`,  
Gender `varchar(1)` `NOT NULL`,  
Address `varchar(50)` `NOT NULL`,  
HandPhoneNo `int` `NOT NULL`,  
DateOfBirth `date` `NOT NULL`,  
NumOfSiblings `int` `NULL`,  
`PRIMARY KEY` (AdmNo)  
);

- a. Consider for the above fields the appropriate date type to use; and whether the value for the field has to contain a value (`NOT NULL`).
- b. Based on your judgement, decide on the primary key and specify it using `PRIMARY KEY` (<field name>) in the query.

## Activity5: Insert values into Table using SQL

1. Now we want to insert some values into the table we just created.

Try to populate at least 1 row of data using following syntax:

`INSERT INTO` <tablename>

`VALUES` (<value1>, <value2>, <value3> ,....<valueN>)

Make sure the values you keyed in matched the data type you have specified.

- `INSERT INTO` StudentDetails  
`VALUES` ('123456A', 'Jack', 'M', 'Ang Mo Kio', 12345678, '2010-01-01', 2);
- `INSERT INTO` StudentDetails  
`VALUES` ('125364D', 'Jack', 'M', 'Ang Mo Kio', 12345678, '2010-01-01', `NULL`);
- `SELECT` \* `FROM` StudentDetails;