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## CIS 3344: Lab 5

### 1. User Table: scientist

planet - Table **scientist - Table**

Table Name:  Schema: **sp17\_3344\_1\_tug25055**

Collation:  Engine:

Comments:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
scientist_id	INT(10)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
scientist_email	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
scientist_password	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
scientist_Name	VARCHAR(45)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NULL
user_Role	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Column Name:

Collation:

Comments:

Data Type:

Default:

Storage: ☐ Virtual ☐ Stored

☐ Primary Key ☐ Not Null ☐ Unique

☐ Binary ☐ Unsigned ☐ Zero Fill

☐ Auto Increment ☐ Generated

Columns Indexes Foreign Keys Triggers Partitioning Options

### 2. Other Table: planet

planet - Table

Table Name:  Schema: **sp17\_3344\_1\_tug25055**

Collation:  Engine:

Comments:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
planet_id	INT(11)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
planetName	VARCHAR(100)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
p_descriptor	VARCHAR(45)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NULL
planet_url	VARCHAR(45)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NULL
date_Discovered	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NULL
planet_Size	DOUBLE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NULL

Column Name:

Collation:

Comments:

Data Type:

Default:

Storage: ☐ Virtual ☐ Stored

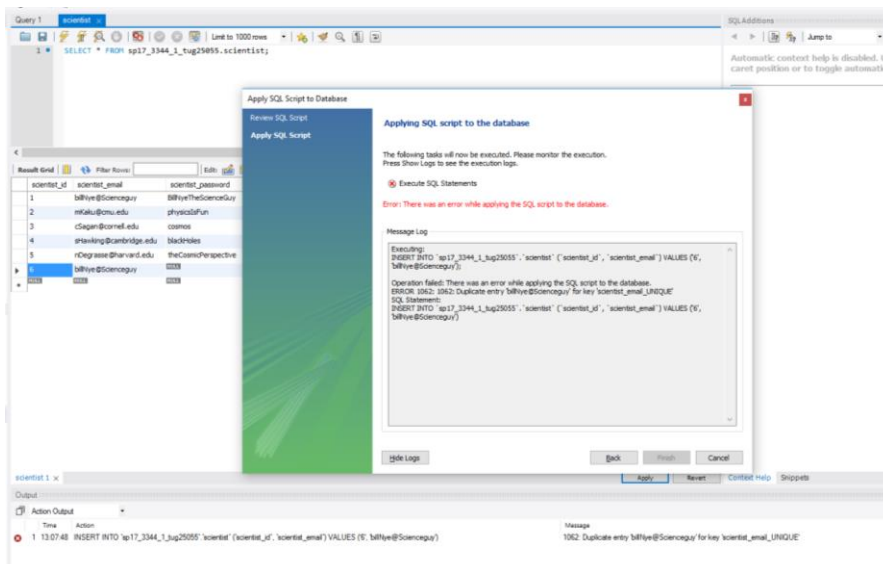
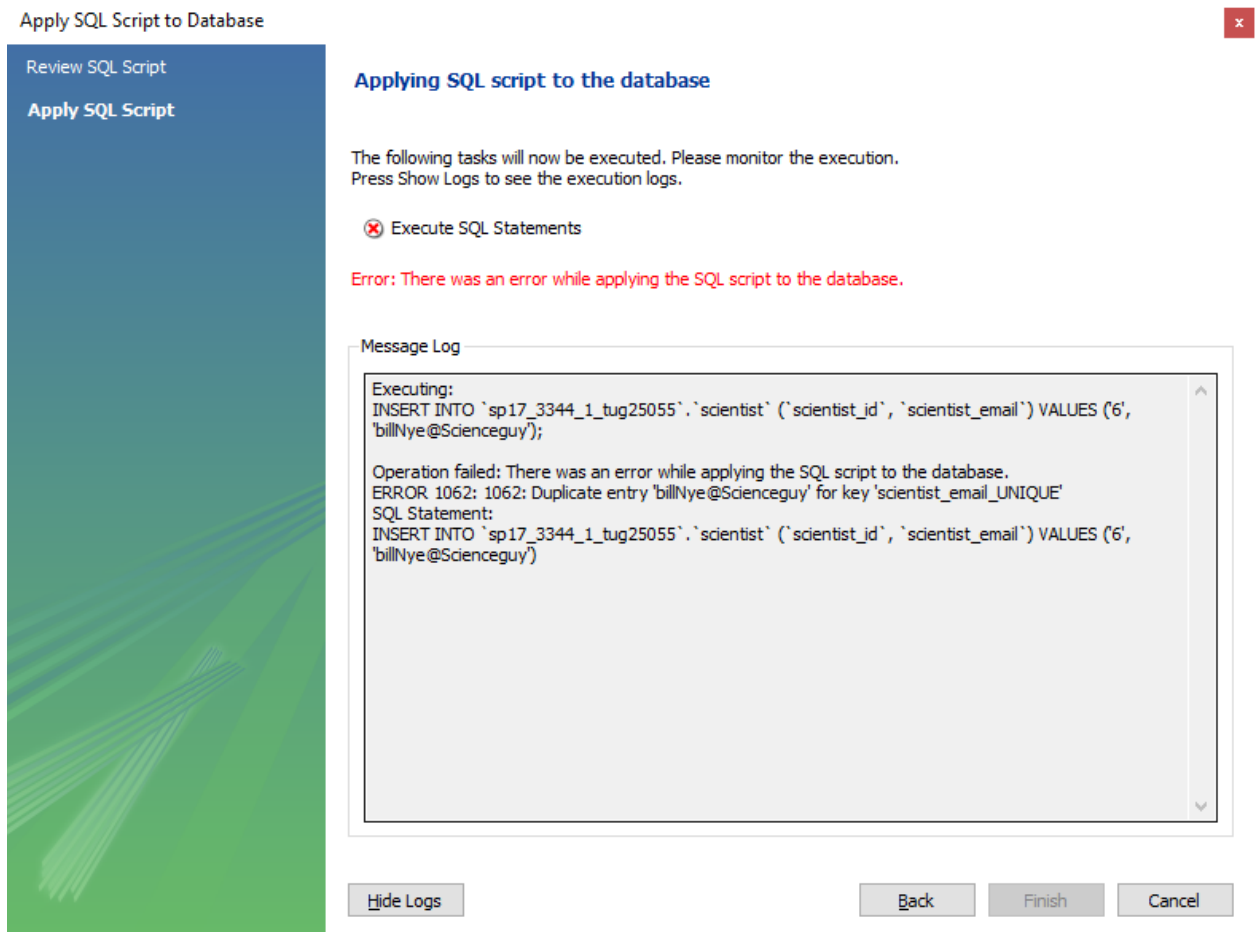
☐ Primary Key ☐ Not Null ☐ Unique

☐ Binary ☐ Unsigned ☐ Zero Fill

☐ Auto Increment ☐ Generated

Columns Indexes Foreign Keys Triggers Partitioning Options

3. Get a screen capture from MySQL Workbench of error message that you get when you try to **insert** a record into your **User** table that has the same descriptor field as some record that already exists in the table. Your web application will get this same database exception error message (if your user tries to do such an insert), so try to get familiar with how the database management system works in this regard.



- Apply SQL Script to Database

Review SQL Script

Apply SQL Script

Applying SQL script to the database

The following tasks will now be executed. Please monitor the execution. Press Show Logs to see the execution logs.

Execute SQL Statements

Error: There was an error while applying the SQL script to the database.

Message Log

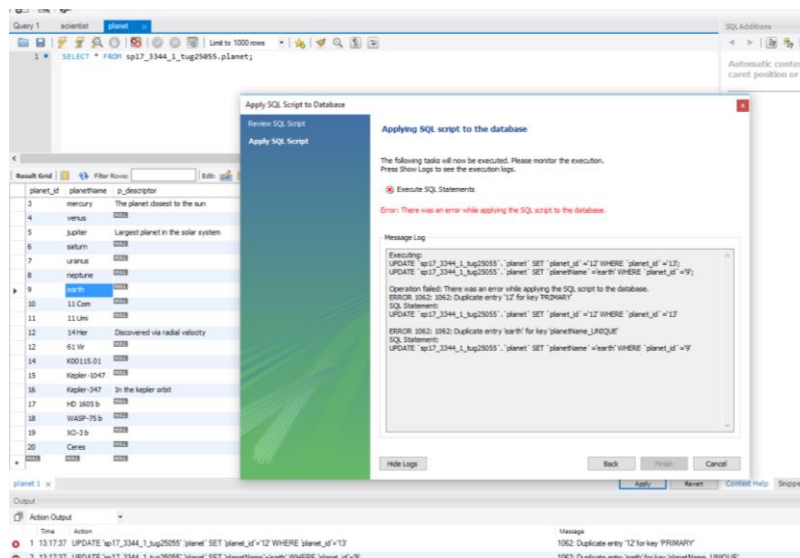
Executing:  
UPDATE `sp17\_3344\_1\_tug25055`.`planet` SET `planet\_id`='12' WHERE `planet\_id`='13';  
UPDATE `sp17\_3344\_1\_tug25055`.`planet` SET `planetName`='earth' WHERE `planet\_id`='9';  
  
Operation failed: There was an error while applying the SQL script to the database.  
ERROR 1062: 1062: Duplicate entry '12' for key 'PRIMARY'  
SQL Statement:  
UPDATE `sp17\_3344\_1\_tug25055`.`planet` SET `planet\_id`='12' WHERE `planet\_id`='13'  
  
ERROR 1062: 1062: Duplicate entry 'earth' for key 'planetName\_UNIQUE'  
SQL Statement:  
UPDATE `sp17\_3344\_1\_tug25055`.`planet` SET `planetName`='earth' WHERE `planet\_id`='9'

Hide Logs

Back

Finish

Cancel



5. Write and execute the following three **SQL SELECT statements**, then copy/paste a screen capture (sql query area, result set area, plus output area, as shown below) into a document (doc, rtf, or pdf). Get a good (legible) screen capture as mentioned before, by selecting out just the parts that are needed.
- a. **First select statement:** All the fields of all records in your User table, ordered by email address. Select the column names individually (don't use SELECT \*). Since users expect the first column to be in order, make the email address be the first column and display the rest of the columns as you think your users (Administrators) would want to see it on the web page you will be creating later in the semester. Even though user passwords should never be displayed to any user (even administrator), we are doing this anyway, for ease of testing and grading.

The screenshot displays a database management interface. At the top, a tab labeled 'Query 1' is active, showing a SQL query: `SELECT scientist_email, scientist_Name, scientist_id, scientist_password, user_Role FROM scientist order by scientist_email;`. Below the query editor, the 'Result Grid' shows a table with 5 columns: `scientist_email`, `scientist_Name`, `scientist_id`, `scientist_password`, and `user_Role`. The table contains 6 rows, with the first row highlighted. The bottom section, labeled 'Output', shows the execution log with a single entry: `1 13:20:49 SELECT scientist_email, scientist_Name, scientist_id, scientist_password, user_Role FROM scientist order by scientist_email LIMIT 0, 1000`, with a message indicating '5 row(s) returned'.

scientist_email	scientist_Name	scientist_id	scientist_password	user_Role
billNye@scienceguy	Bill Nye	1	BillNyeTheScienceGuy	Member
cSagan@cornell.edu	Carl Sagan	3	cosmos	Admin
mKaku@cmu.edu	Michio Kaku	2	physicsIsFun	Member
nDegrasse@harvard.edu	Neil Tyson Degrasse	5	theCosmicPerspective	member
sHawking@cambridge.edu	Stephen Hawking	4	blackHoles	member
NULL	NULL	NULL	NULL	NULL

Output

Time	Action	Message
1 13:20:49	SELECT scientist_email, scientist_Name, scientist_id, scientist_password, user_Role FROM scientist order by scientist_email LIMIT 0, 1000	5 row(s) returned

- b. **Second select statement:** All the fields of all records in your Other table, ordered by the unique descriptor field. Select the column names individually (don't use SELECT \*). Since users expect the first column to be in order, make the descriptor field be the first column and display the rest of the columns as you think your users would want to see it on the web page you will be creating later in the semester. It is likely that you will not be able to get all 20+ records to show on a single screen capture, so just get the first records on one screen capture and the last records on another screen capture. If you are unable to get all the fields to show in the screen capture, just put the long URLs as the last columns of your select statement and it is OK if we cannot see them.

Query 1 scientist planet

```

1 SELECT planetName, planet_id, planet_Size, date_Discovered, p_descriptor, planet_url
2 FROM sp17_3344_1_tug25055.planet
3 ORDER BY planetName;

```

Result Grid

planetName	planet_id	planet_Size	date_Discovered	p_descriptor	planet_url
11 Com	10	0	NULL	NULL	NULL
11 Umi	11	NULL	NULL	NULL	NULL
14 Her	12	NULL	NULL	Discovered via radial velocity	NULL
61 Vir	13	512	0000-00-00	NULL	NULL
Ceres	20	NULL	NULL	NULL	NULL
earth	1	NULL	0000-00-00	NULL	<a href="https://upload.wikimedia.org/wikipedia/common">https://upload.wikimedia.org/wikipedia/common</a>
HD 1605 b	17	NULL	NULL	NULL	NULL
jupiter	5	12353	NULL	Largest planet in the solar system	<a href="https://en.wikipedia.org/wiki/Jupiter#/media/">https://en.wikipedia.org/wiki/Jupiter#/media/</a>
K00115.01	14	1342	2016-10-11	NULL	NULL
Kepler-1047	15	NULL	NULL	NULL	NULL
Kepler-347	16	NULL	NULL	In the kepler orbit	NULL
mars	2	6792	1968-02-22	The red planet with the potential...	<a href="https://upload.wikimedia.org/wikipedia/common">https://upload.wikimedia.org/wikipedia/common</a>
mercury	3	NULL	0265-01-01	The planet closest to the sun	<a href="https://en.wikipedia.org/wiki/Mercury_(planet)">https://en.wikipedia.org/wiki/Mercury_(planet)</a>
neptune	8	890	1800-07-29	NULL	<a href="https://en.wikipedia.org/wiki/Neptune#/media/">https://en.wikipedia.org/wiki/Neptune#/media/</a>
pluto	9	525	NULL	NULL	<a href="https://en.wikipedia.org/wiki/Pluto">https://en.wikipedia.org/wiki/Pluto</a>
saturn	6	123	NULL	NULL	<a href="https://en.wikipedia.org/wiki/Saturn#/media/F">https://en.wikipedia.org/wiki/Saturn#/media/F</a>
uranus	7	1325	NULL	NULL	<a href="https://en.wikipedia.org/wiki/Uranus#/media/F">https://en.wikipedia.org/wiki/Uranus#/media/F</a>
venus	4	213	0200-10-21	NULL	<a href="https://en.wikipedia.org/wiki/Venus#/media/Fi">https://en.wikipedia.org/wiki/Venus#/media/Fi</a>
WASP-75 b	18	NULL	NULL	NULL	NULL
XO-3 b	19	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL

planet 4

Output

Action Output

Time	Action	Message
1 13:25:42	SELECT planetName, planet_id, planet_Size, date_Discovered, p_descriptor, planet_url FROM sp17_3344_1_tug25055.planet ORDER BY planetName L...	20 row(s) returned

- c. **Third select statement:** The same columns and order as the second select statement, but having an additional condition in the WHERE clause that uses the SQL LIKE keyword and % for wild card match. Choose your WHERE clause so that you get at least several rows in your result set (but not more than can fit in one screen capture). Here is an example using the LIKE SQL keyword that returns all records where user\_email starts with "S": `SELECT * FROM web_users WHERE user_email LIKE 'S%';`

Query 1
Query1
Query2
planet

Limit to 1000 rows

```

1 SELECT planetName, planet_id, planet_Size, date_Discovered, p_descriptor, planet_url
2 FROM sp17_3344_1_tug25055.planet
3 WHERE p_descriptor LIKE '%The%'
4 ORDER BY planetName;

```

Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:

	planetName	planet_id	planet_Size	date_Discovered	p_descriptor	planet_url
▶	jupiter	5	12353	NULL	Largest planet in the solar system	<a href="https://en.wikipedia.org/wiki/Jupiter#/media/">https://en.wikipedia.org/wiki/Jupiter#/media/</a>
	Kepler-347	16	NULL	NULL	In the kepler orbit	NULL
	mars	2	6792	1968-02-22	The red planet with the potential for life	<a href="https://upload.wikimedia.org/wikipedia/common">https://upload.wikimedia.org/wikipedia/common</a>
	mercury	3	NULL	0265-01-01	The planet closest to the sun	<a href="https://en.wikipedia.org/wiki/Mercury_(planet">https://en.wikipedia.org/wiki/Mercury_(planet</a>
*	NULL	NULL	NULL	NULL	NULL	NULL

planet 6

Output

Action Output

	Time	Action	Message
✓	1 13:30:01	SELECT planetName, planet_id, planet_Size, date_Discovered, p_descriptor, planet_url FROM sp17_3344_1_tug25055.planet WHERE p_descriptor LIK...	4 row(s) returned