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2. https://cis-linux2.temple.edu/tomcat/fa23_3308_tuk31354/index_1.html
3. user_role TABLE DESIGN

Column	Datatype	PK	NN	UQ	B...	UN	ZF	AI	G	Default / Expression
↑ user_role_id	INT(11)	◆	✓	✓	✓	■	■	■	■	
◆ user_role_type	VARCHAR(45)	◆	✓	✓	■	■	■	■	■	

4. web_user TABLE DESIGN and FOREIGN KEY

Column	Datatype	PK	NN	UQ	B...	UN	ZF	AI	G	Default / Expression
↑ web_user_id	INT(11)	◆	✓	✓	■	■	■	■	✓	
◆ user_email	VARCHAR(45)	◆	■	✓	✓	■	■	■	■	
◆ user_password	VARCHAR(45)	◆	■	✓	■	■	■	■	■	
◆ image	VARCHAR(100)	◆	■	■	■	■	■	■	■	NULL
◆ membership...	DECIMAL(8,2)	◆	■	■	■	■	■	■	■	NULL
◆ birthday	DATE	◆	■	■	■	■	■	■	■	NULL
◆ user_role_id	INT(11)	◆	■	■	✓	■	■	■	■	


```
1 • alter table web_user add foreign key (user_role_id) references user_role (user_role_id);
```

Action Output

Time	Action	Response	Duration / Fetch Time
16:14:20	alter table web_user add foreign key (user_role_id) references user_role (user_role_id)	0 row(s) affected Records: 0 Duplicates: 0 Warning... 0.397 sec	

5. “OTHER” TABLE DESIGN and FOREIGN KEY

The screenshot shows the MySQL Workbench interface. At the top, there is a table structure for 'tblVendingMachine' with columns: ID (INT(11)), ticketID (VARCHAR(45)), ticketDate (DATE), image (VARCHAR(100)), latitude (DOUBLE(9,7)), longitude (DOUBLE(10,7)), description (VARCHAR(100)), acceptsBillsA... (TINYINT(1)), acceptsEPay... (TINYINT(1)), review (TINYINT(1)), and web_user_id (INT(11)). The 'web_user_id' column has a checkmark in the 'Primary Key' column, indicating it is the primary key for the table.

In the bottom query editor window, the following SQL command is shown:

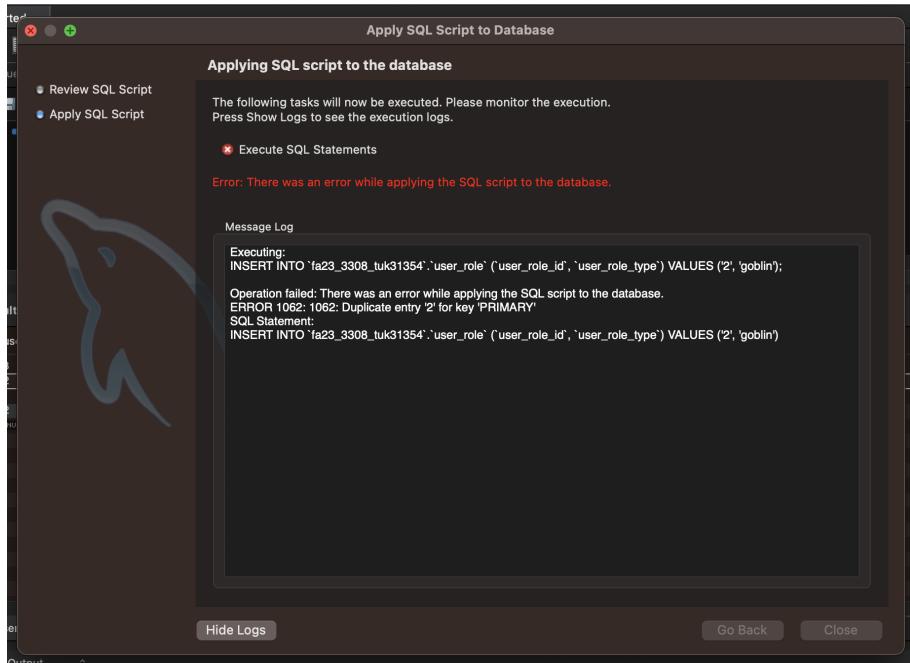
```
1 alter table tblVendingMachine add foreign key (web_user_id) references web_user(web_user_id);
```

The 'Action Output' pane at the bottom displays the execution log with 15 entries, showing the creation of the table and the addition of the foreign key constraint.

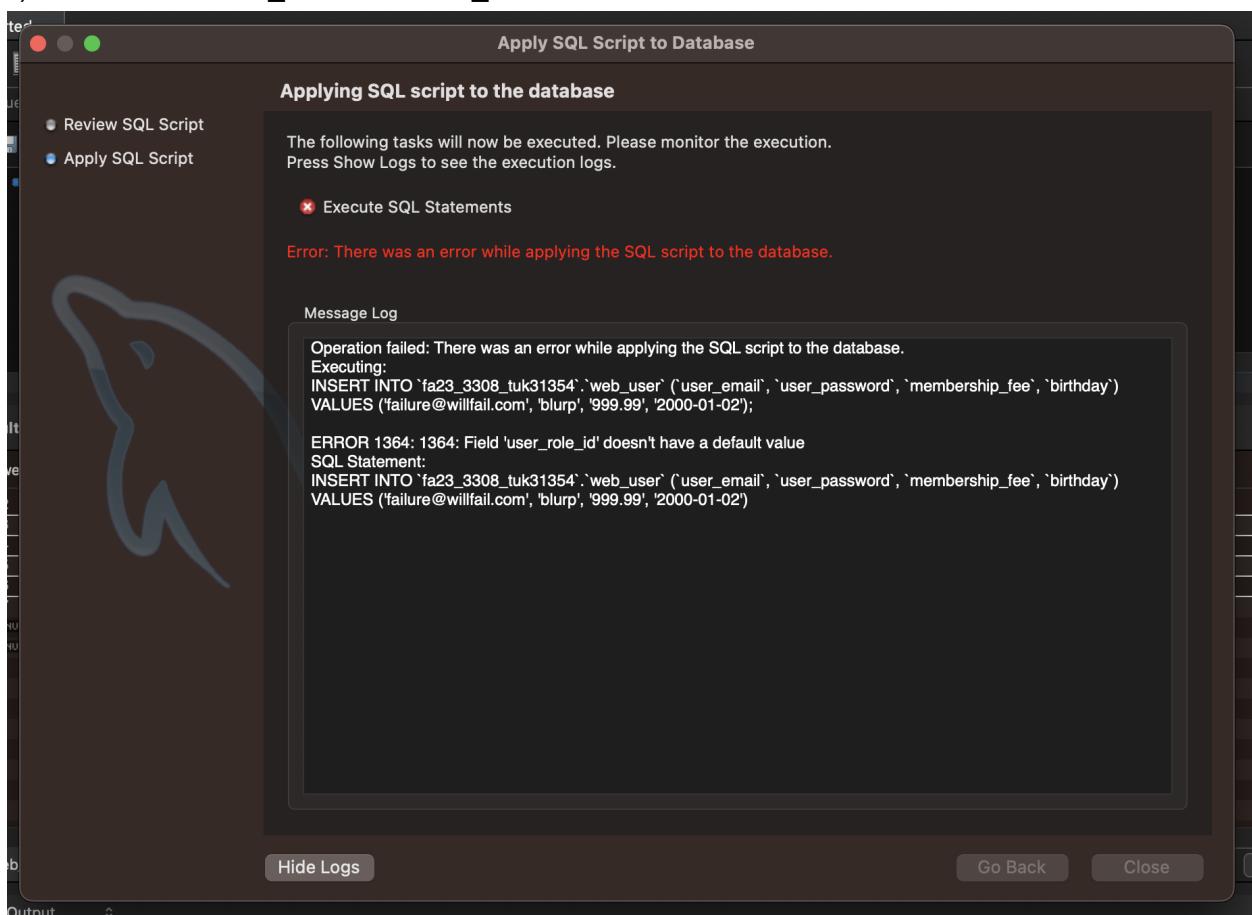
Action	Time	Response	Duration / Fetch Time
DROP TABLE ta23_3308_tuk313b4 . `tblVendingMachine`	15:20:47	0 row(s) affected	1.10 sec
Apply changes to tblVendingMachine	15:20:54	No changes detected	
Apply changes to tblVendingMachine	15:20:55	No changes detected	
Apply changes to tblVendingMachine	15:21:09	No changes detected	
Apply changes to tblVendingMachine	15:21:15	No changes detected	
Apply changes to tblVendingMachine	15:22:59	Changes applied	
Apply changes to tblVendingMachine	15:23:28	Changes applied	
Apply changes to tblVendingMachine	15:24:00	Changes applied	
Apply changes to tblVendingMachine	15:25:49	Changes applied	
alter table tblVendingMachine add foreign key (web_user_id) references web_user(web_user_id)	15:27:09	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0 3.112 sec	

6. DATA ENTRY ERRORS

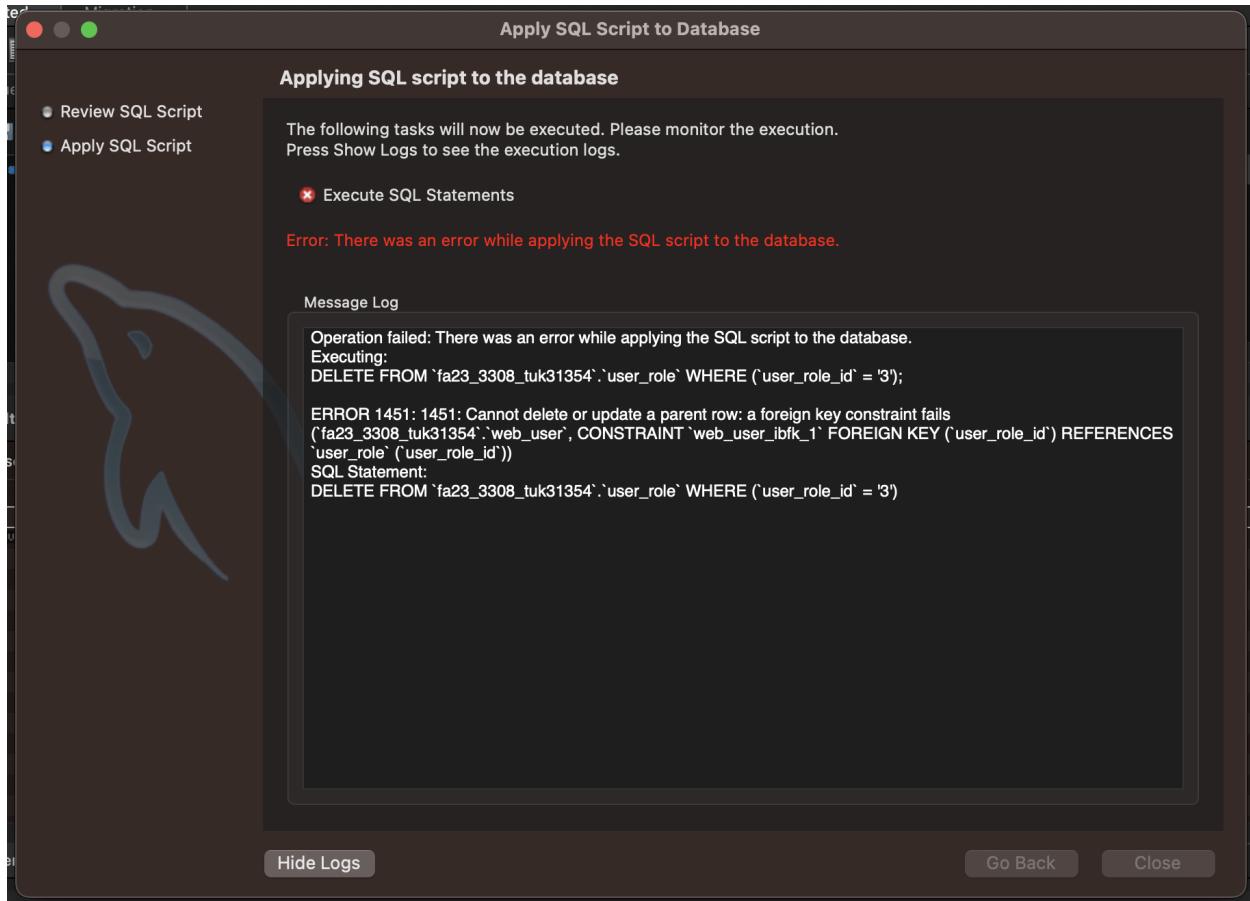
a) Error: Duplicate user_role PK



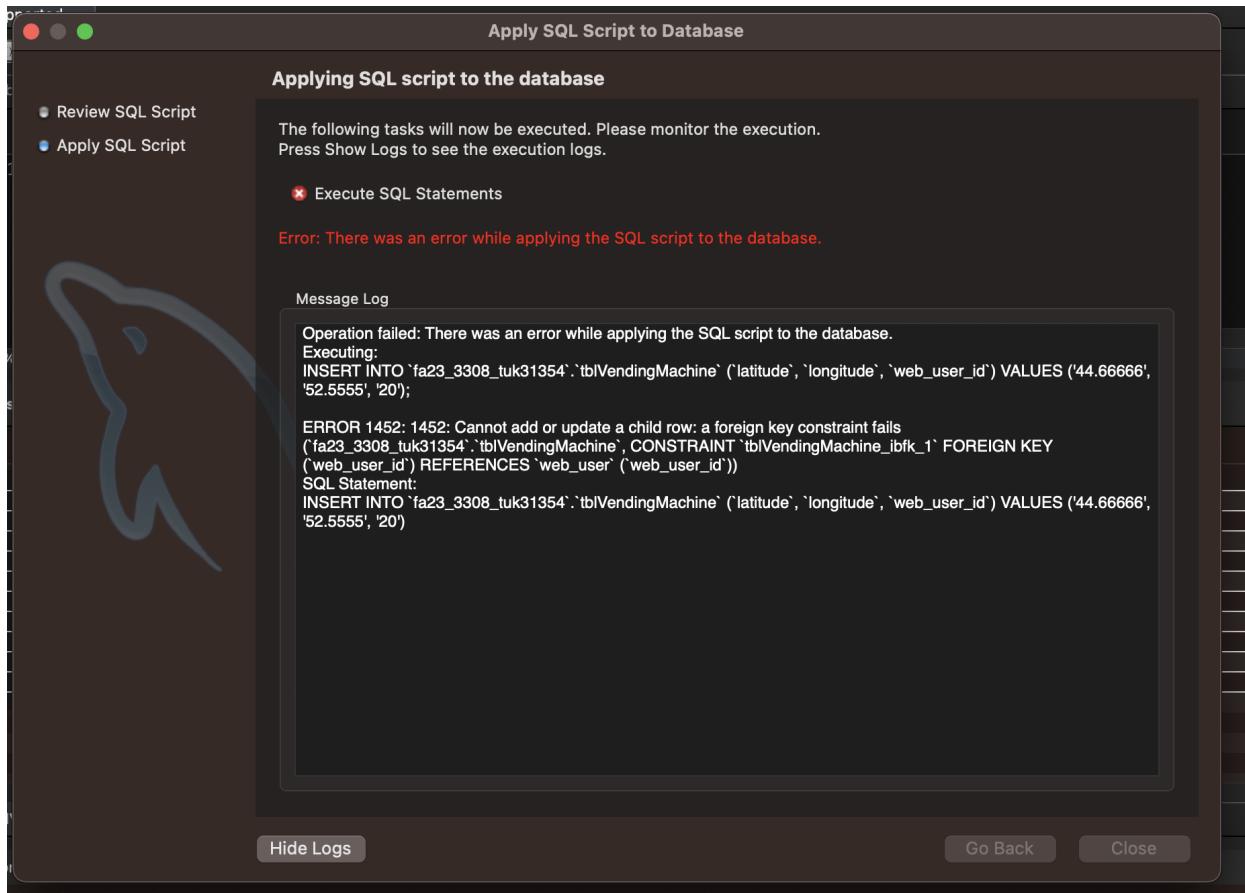
b) Error: Invalid user_role FK in web_user record



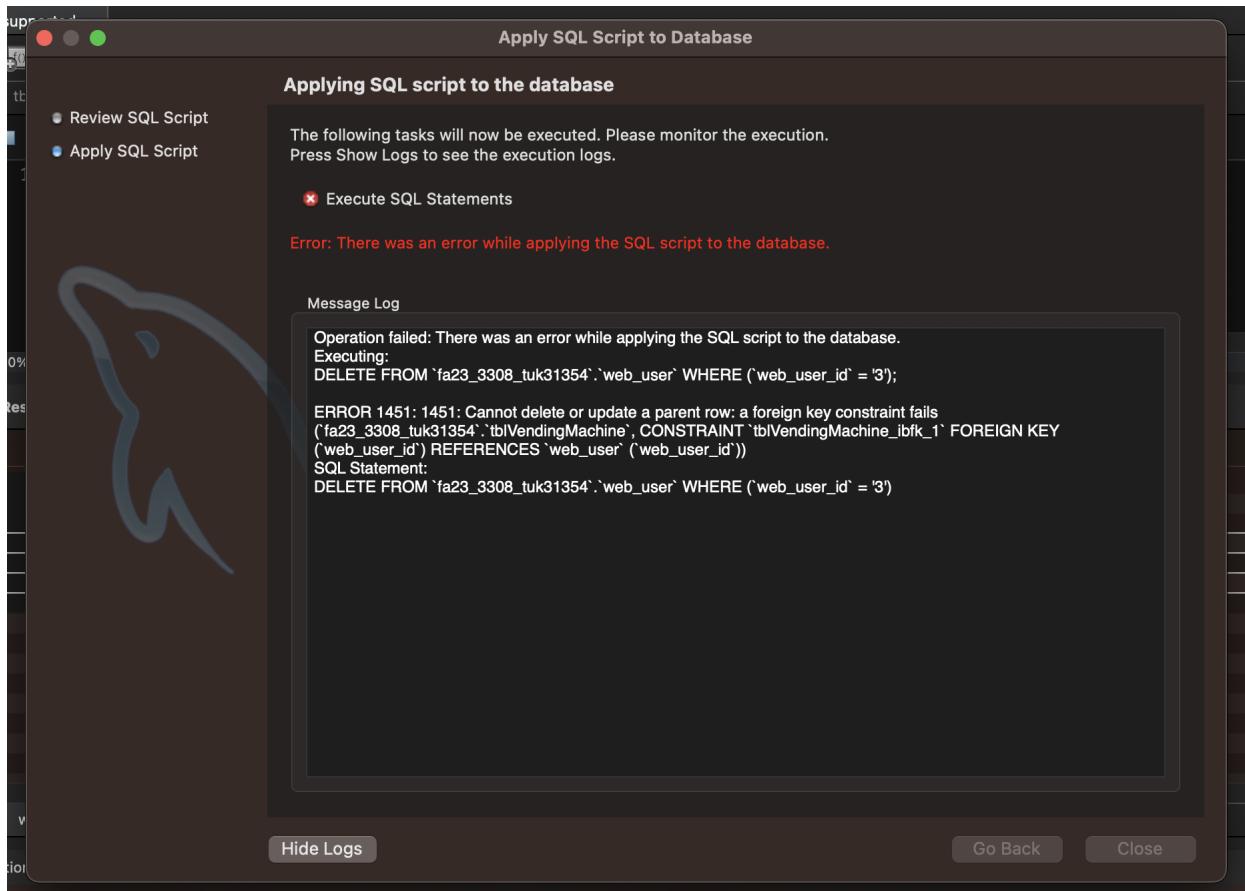
c) Error: Cannot delete a user_role record that's referenced by a web_user record



d) Invalid web_user FK in “other” record



- e) Error trying to delete a web_user record that's referenced by an “other” record



7. SELECT STATEMENTS

a) USER_ROLE: all rows, all columns, sorted by user_role_id.

```
Query 1 | user_role - Table | web_user - Table | web_user |
1  SELECT * FROM user_role ORDER BY user_role_id;
2
```

Result Grid | Filter Rows: | Search | Edit: | Export/Import: | Result Grid | Form Editor | Field Types

user_role_id	user_role_ty...
1	wizard
2	mage
3	fairy
HULL	HULL

b) WEB_USER: all rows, all columns, sorted by web_user_id.

```
Query 1  dscl_01e  Table  WEB_EAM  Home  WEB_DASH
Limit to 1000 rows
1  SELECT * FROM web_user ORDER BY web_user_id;
2

100%  44:1 | Result Grid  Filter Rows: Search  Edit:  Export/Import:  Result Grid  Form Editor  Field Types
```

web_user_id	user_email	user_password	image	membership_f...	birthday	user_role_id
2	tuk31354@temple.edu	password	HULL	HULL	2023-09-07	2
3	mail@mail.com	qwert	HULL	0.00	1999-01-01	1
4	gmail@yahoo.com	bing	https://play.google.com/store/apps/details?id=co...	HULL	HULL	1
5	numbers@letters.com	abacus	HULL	HULL	HULL	3
6	joke@nofunny.com	popcorn	HULL	99.99	HULL	2
7	Sequel	SQL	HULL	15.00	1970-01-01	3
8	failure@willfail.com	blurp	https://s3.amazonaws.com/pix.emoji.com/imag...	999.99	2000-01-02	1
HULL	HULL	HULL	HULL	HULL	HULL	HULL

c) WEB_USER JOINED WITH USER_ROLE: all rows, certain columns, sorted.

The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query editor at the top contains the following SQL code:

```
1 SELECT user_role_type, user_email FROM web_user, user_role WHERE web_user.user_role_id = user_role.user_role_id ORDER BY user_role_type;
2
```

The results grid below displays the data from the query:

user_role_type	user_email
fairy	numbers@letters.com
fairy	Sequel
mage	joke@nofunny.com
mage	tuk31354@temple.edu
wizard	mail@mail.com
wizard	failure@willfail.com
wizard	gmail@yahoo.com

On the right side of the interface, there is a vertical toolbar with several icons: a folder, a lightning bolt, a shield, a bomb, a question mark, a checkmark, a cross, a magnifying glass, a gear, and a refresh symbol. Below the toolbar, there are four tabs labeled "Result Grid", "Form Editor", "Field Types", and "Query Stats".

f) "OTHER": all rows, all columns, sorted by the id of your "other" table.

g) "OTHER" JOINED WITH WEB_USER all rows, certain columns, sorted.

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:1 • SELECT ticketID, user_email FROM fa23_3308_tuk31354.tblVendingMachine, web_user
2 | Where tblVendingMachine.web_user_id = web_user.web_user_id ORDER BY ticketID, user_email;The result grid displays 13 rows with columns 'ticketID' and 'user_email'. The data is:

ticketID	user_email
ticket0000	tuk31354@temple.edu
ticket0003	mail@mail.com
ticket0006	joke@notfunny.com
ticket0007	mail@mail.com
ticket0008	tuk31354@temple.edu
ticket0009	mail@mail.com
ticket0010	gmail@yahoo.com
ticket0011	numbers@letters.com
ticket0012	joke@notfunny.com
ticket0013	Sequel

h) "OTHER" JOINED WITH WEB_USER some rows, certain columns, sorted.

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:1 • SELECT ticketID, user_email FROM fa23_3308_tuk31354.tblVendingMachine, web_user
2 | Where tblVendingMachine.web_user_id = web_user.web_user_id AND latitude < 60.0 ORDER BY ticketID, user_email;The result grid displays 5 rows with columns 'ticketID' and 'user_email'. The data is:

ticketID	user_email
ticket0003	mail@mail.com
ticket0006	joke@notfunny.com
ticket0007	mail@mail.com
ticket0011	numbers@letters.com