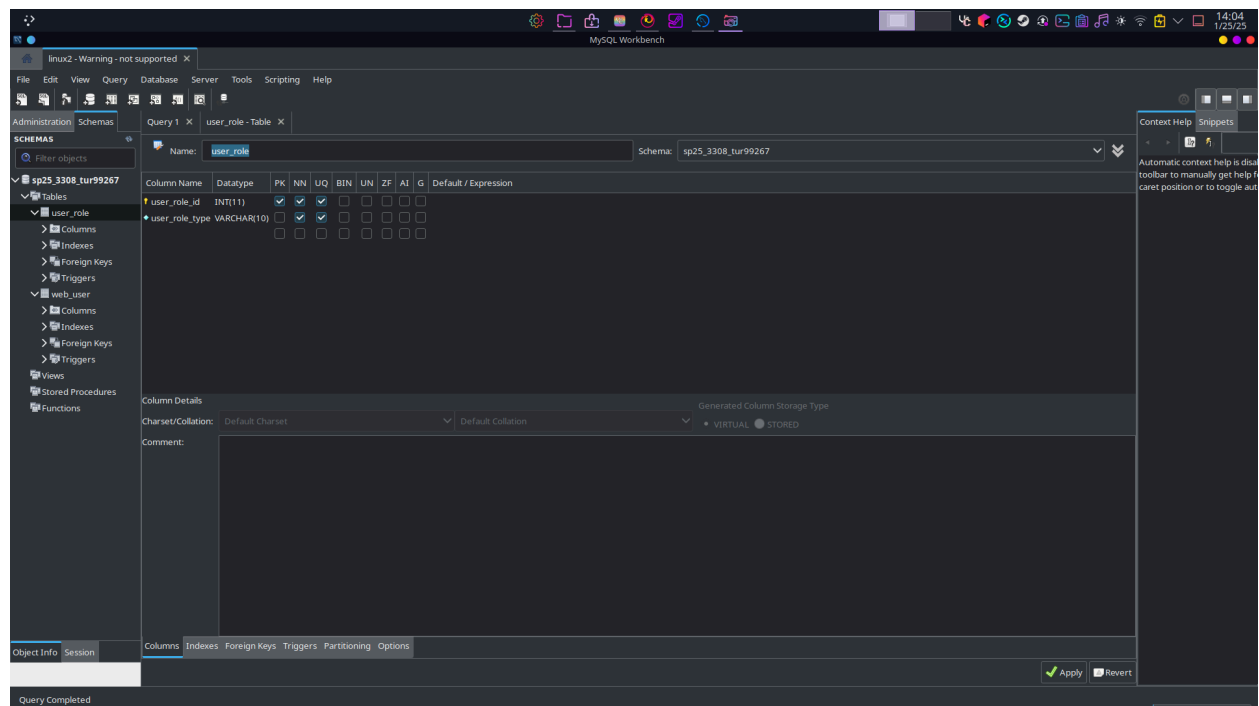
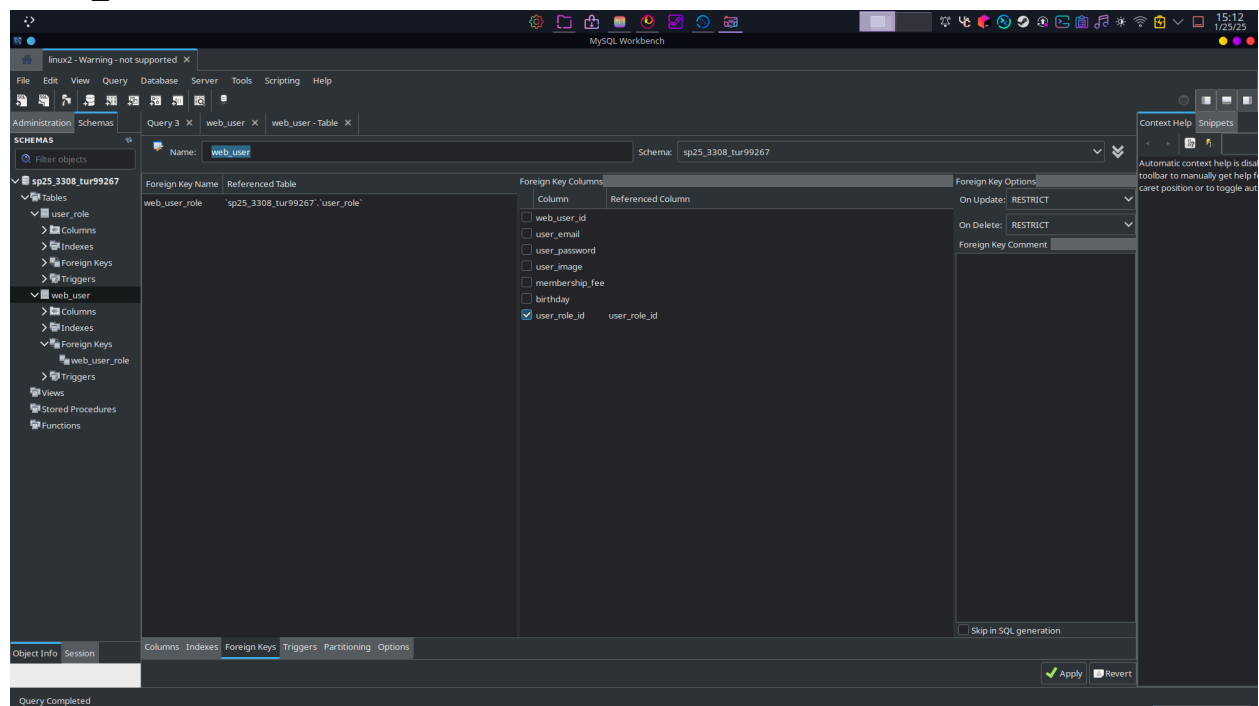


1. Ellie Fiera
2. [https://cis-linux2.temple.edu/tomcat10/sp25\\_3308\\_tur99267/](https://cis-linux2.temple.edu/tomcat10/sp25_3308_tur99267/)
3. user\_role TABLE DESIGN



#### 4. web\_user TABLE DESIGN and FOREIGN KEY



## 5. "OTHER" TABLE DESIGN and FOREIGN KEY

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left shows the 'sp25\_3308\_tur99267' database. The 'books' table is selected. The 'Columns' tab is active, showing the following columns:

Column Name	Datatype	PK	NN	UQ	BIN	UN	ZF	AI	G	Default / Expression
book_id	INT(11)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
isbn	BIGINT(13)	<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"/>	
book_title	VARCHAR(50)	<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
book_img	VARCHAR(1000)	<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
pub_date	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
user_id	INT(11)	<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"/>	

The 'Foreign Keys' tab is active, showing the 'web\_user\_id' foreign key. The 'Columns' tab is also active, showing the 'book\_id' column.

Object Info Session

#	Time	Action	Message	Duration / Fetch
62	17:56:53	SELECT * FROM sp25_3308_tur99267 / books LIMIT 0, 1000	10 rows(s) returned	0.070 sec / 0.000016...
63	17:57:29	ALTER TABLE books ADD CONSTRAINT web_user_id FOREIGN KEY (user_id) REFERENCES sp25_3308_tur99267 (web_user_id)	Error Code: 1005. Can't create table 'sp25_3308_tur99267'. Error: Table 'sp25_3308_tur99267' doesn't exist	0.023 sec
64	17:57:48	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267 books JOIN web_user ON books.user_id = web_user.user_id	0 row(s) returned	0.0047 sec / 0.00001...
65	17:57:58	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267 books JOIN web_user ON books.user_id = web_user.user_id	70 row(s) returned	0.0069 sec / 0.00004...
66	17:58:42	Apply changes to books	Changes applied	
67	18:00:22	SELECT * FROM sp25_3308_tur99267 books LIMIT 0, 1000	10 rows(s) returned	0.0060 sec / 0.00001...

Query Completed

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left shows the 'sp25\_3308\_tur99267' database. The 'books' table is selected. The 'Columns' tab is active, showing the following columns:

Column Name	Datatype	PK	NN	UQ	BIN	UN	ZF	AI	G	Default / Expression
book_id	INT(11)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
isbn	BIGINT(13)	<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"/>	
book_title	VARCHAR(50)	<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
book_img	VARCHAR(1000)	<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
pub_date	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
user_id	INT(11)	<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"/>	

The 'Foreign Keys' tab is active, showing the 'web\_user\_id' foreign key. The 'Columns' tab is also active, showing the 'book\_id' column.

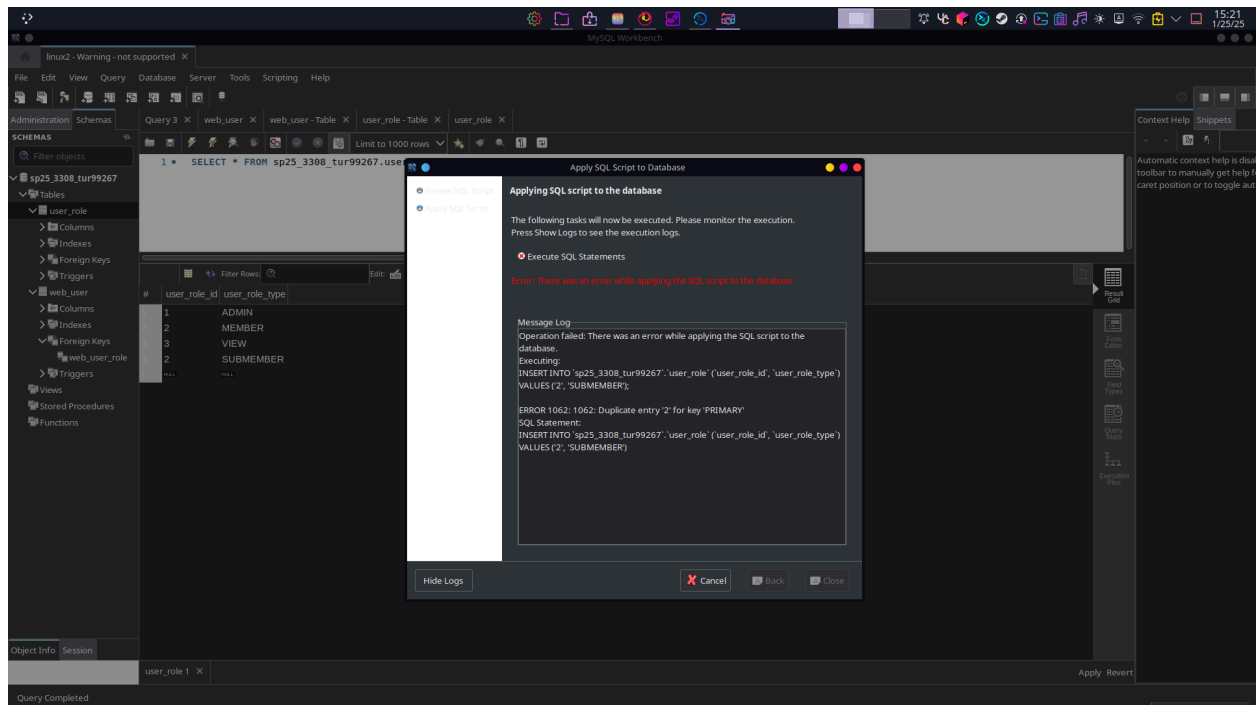
Object Info Session

#	Time	Action	Message	Duration / Fetch
62	17:56:53	SELECT * FROM sp25_3308_tur99267 / books LIMIT 0, 1000	10 rows(s) returned	0.070 sec / 0.000016...
63	17:57:29	ALTER TABLE books ADD CONSTRAINT web_user_id FOREIGN KEY (user_id) REFERENCES sp25_3308_tur99267 (web_user_id)	Error Code: 1005. Can't create table 'sp25_3308_tur99267'. Error: Table 'sp25_3308_tur99267' doesn't exist	0.023 sec
64	17:57:48	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267 books JOIN web_user ON books.user_id = web_user.user_id	0 row(s) returned	0.0047 sec / 0.00001...
65	17:57:58	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267 books JOIN web_user ON books.user_id = web_user.user_id	70 row(s) returned	0.0069 sec / 0.00004...
66	17:58:42	Apply changes to books	Changes applied	
67	18:00:22	SELECT * FROM sp25_3308_tur99267 books LIMIT 0, 1000	10 rows(s) returned	0.0060 sec / 0.00001...

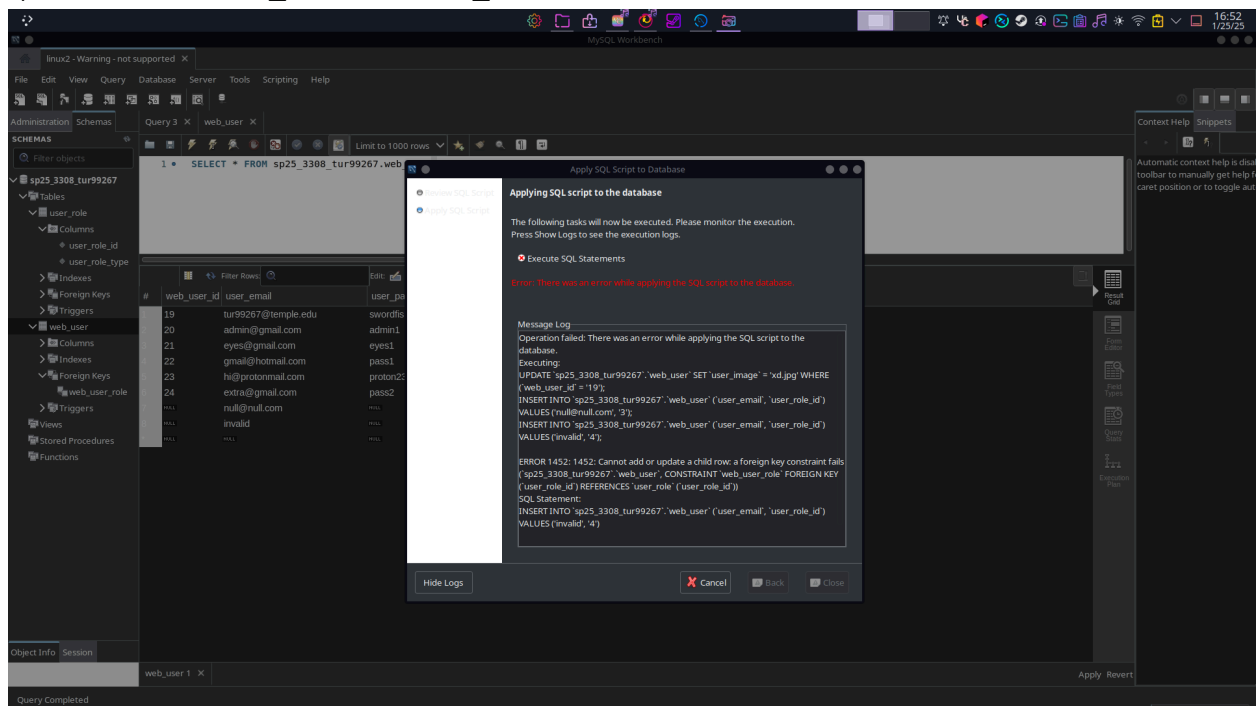
Query Completed

## 6. DATA ENTRY ERRORS

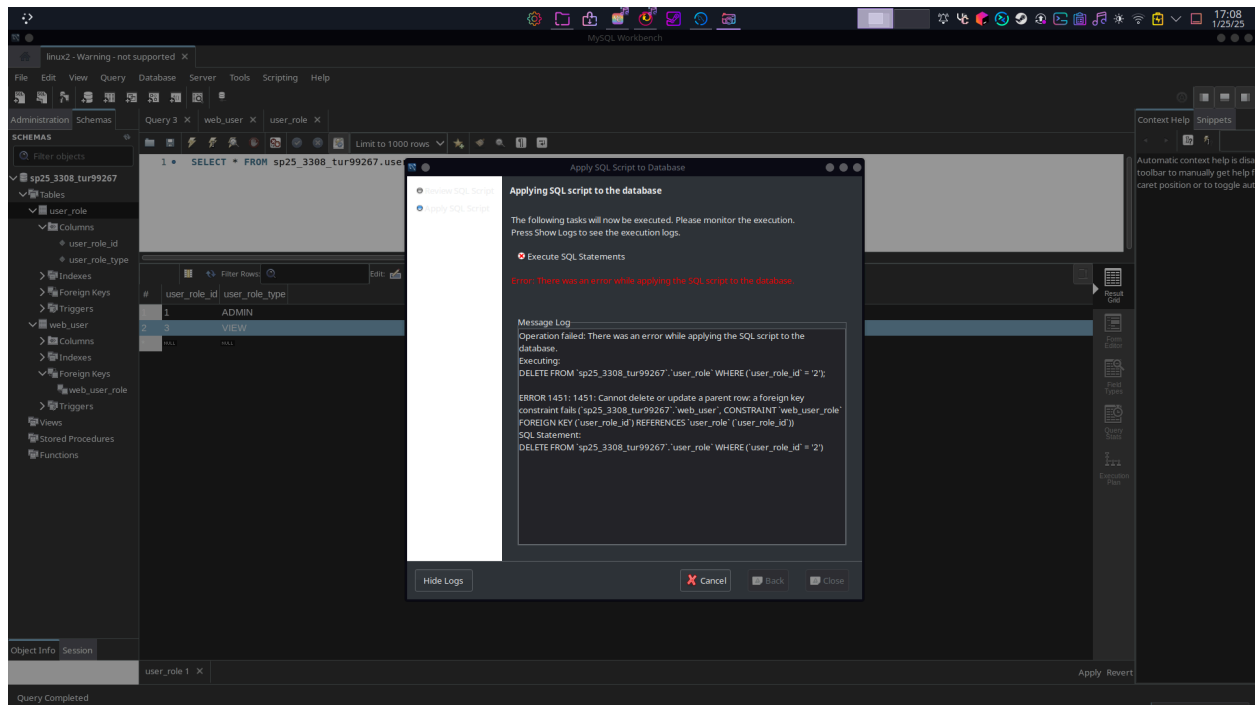
## a) Error: Duplicate user\_role PK



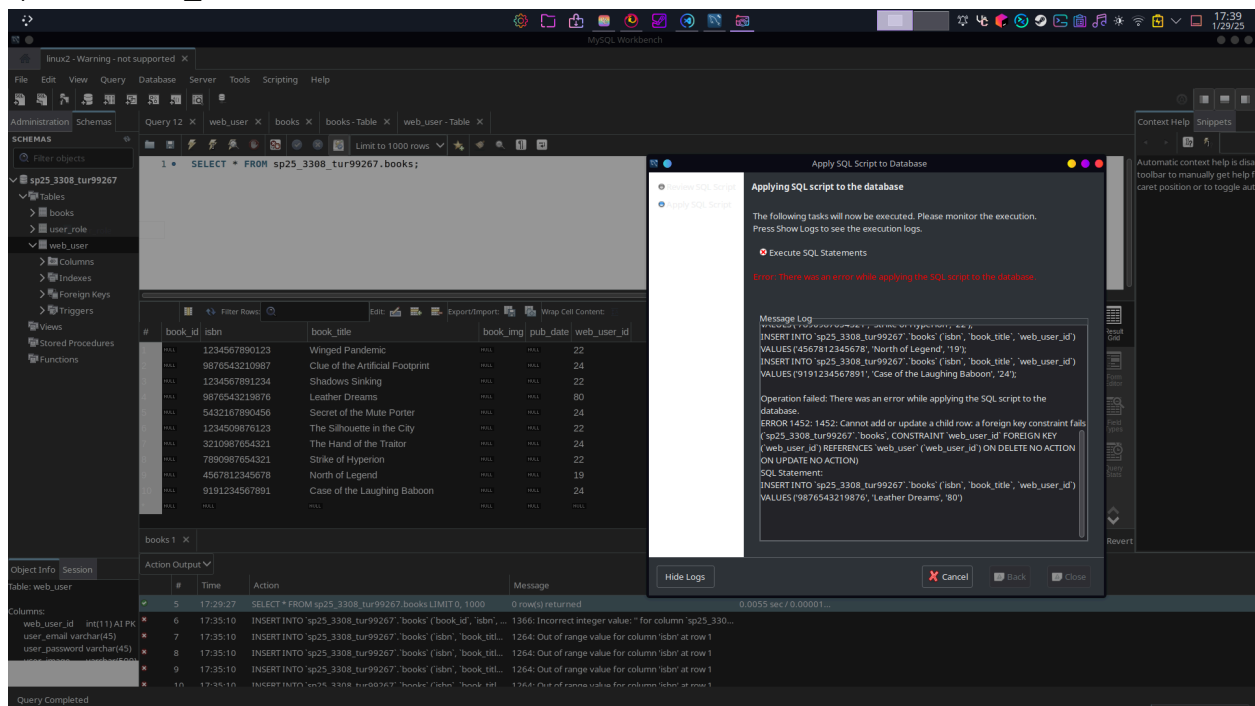
## b) Error: Invalid user\_role FK in web\_user record



### 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

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left shows the database 'sp25\_3308\_tur99267' with tables 'books' and 'web\_user'. The 'Query' window contains the SQL statement: `1 * SELECT * FROM sp25_3308_tur99267.web_user;`. The 'Table' window shows the 'web\_user' table with columns: web\_user\_id, user\_email, user\_password, user\_image, membership\_fee, birthday, user\_role\_id. The 'Messages' pane at the bottom shows the execution of the query. The 'Apply SQL Script to Database' dialog is open, showing the error: 'Error: There was an error while applying the SQL script to the database.' The message log details the error: 'Operation failed: There was an error while applying the SQL script to the database. Executing: DELETE FROM `sp25\_3308\_tur99267`.`web\_user` WHERE (`web\_user\_id` = 22); ERROR 1451: 1451: Cannot delete or update a parent row: a foreign key constraint fails `sp25\_3308\_tur99267`.`books`, CONSTRAINT `web\_user\_id FOREIGN KEY (`web\_user\_id`) REFERENCES `web\_user` (`web\_user\_id`) ON DELETE NO ACTION ON UPDATE NO ACTION` SQL Statement: DELETE FROM `sp25\_3308\_tur99267`.`web\_user` WHERE (`web\_user\_id` = 22)'

## 7. SELECT STATEMENTS

### a) USER\_ROLE: all rows, all columns, sorted by user\_role\_id.

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left shows the database 'sp25\_3308\_tur99267' with tables 'user\_role' and 'web\_user'. The 'Query' window contains the SQL statement: `1 * SELECT * FROM sp25_3308_tur99267.user_role  
2 ORDER BY user_role_id;`. The 'Table' window shows the 'user\_role' table with columns: user\_role\_id, user\_role\_type. The 'Messages' pane at the bottom shows the execution of the query. The 'Apply SQL Script to Database' dialog is open, showing the error: 'Error: There was an error while applying the SQL script to the database.' The message log details the error: 'Operation failed: There was an error while applying the SQL script to the database. Executing: DELETE FROM `sp25\_3308\_tur99267`.`web\_user` WHERE (`web\_user\_id` = 22); ERROR 1451: 1451: Cannot delete or update a parent row: a foreign key constraint fails `sp25\_3308\_tur99267`.`books`, CONSTRAINT `web\_user\_id FOREIGN KEY (`web\_user\_id`) REFERENCES `web\_user` (`web\_user\_id`) ON DELETE NO ACTION ON UPDATE NO ACTION` SQL Statement: DELETE FROM `sp25\_3308\_tur99267`.`web\_user` WHERE (`web\_user\_id` = 22)'

b) WEB\_USER: all rows, all columns, sorted by web\_user\_id.

Query 12 X user\_role X

```
1 • SELECT * FROM sp25_3308_tur99267.web_user
2 ORDER BY web_user_id;
```

#	web_user_id	user_email	user_password	user_image	membership_fee	birthday	user_role_id
19	tur99267@temple.edu	swordfish	xd.jpg	10.00	1992-...	2	
20	admin@gmail.com	admin1	...	...	1980-...	1	
21	eyes@gmail.com	eyes1	...	...	...	3	
22	gmail@hotmail.com	pass1	...	...	...	2	
23	hi@protonmail.com	proton234i	...	17.00	2000-...	2	
24	extra@gmail.com	pass2	...	4.00	2005-...	3	
27	null@null.com	...	...	...	...	3	

web\_user\_4 X

Action Output

#	Time	Action	Message	Duration / Fetch
71	17:25:22	SELECT web_user_id, user_email, web_user_role_id, user_r...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use n...	0.013 sec
72	17:25:40	SELECT web_user_id, user_email, web_user_role_id, user_r...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use n...	0.014 sec
73	17:26:04	SELECT web_user_id, user_email, web_user_role_id, user_r...	Error Code: 1054. Unknown column 'user_email' in 'SELECT'	0.016 sec
74	17:27:41	SELECT web_user_id, user_email, web_user_role_id, user_r...	7 row(s) returned	0.014 sec / 0.000054 ...
75	17:30:18	SELECT web_user_id, user_email, web_user_role_id, user_r...	7 row(s) returned	0.013 sec / 0.000021 ...
76	17:31:23	SELECT * FROM sp25_3308_tur99267.user_role LIMIT 0, 1000	3 row(s) returned	0.014 sec / 0.000007 ...
77	17:31:46	SELECT * FROM sp25_3308_tur99267.user_role ORDER BY use...	3 row(s) returned	0.133 sec / 0.000025 ...
78	17:32:31	SELECT * FROM sp25_3308_tur99267.web_user ORDER BY we...	7 row(s) returned	0.014 sec / 0.000021 ...
79	17:33:14	SELECT * FROM sp25_3308_tur99267.web_user ORDER BY we...	7 row(s) returned	0.015 sec / 0.000018 ...

Query Completed

c) WEB\_USER JOINED WITH USER\_ROLE: all rows, certain columns, sorted.

Query 12 X web\_user X

```
1 SELECT web_user_id, user_email, web_user.user_role_id, user_role_type
2 FROM web_user, user_role
3 WHERE web_user.user_role_id = user_role.user_role_id
4 ORDER BY web_user.user_role_id, user_email;
5
```

#	web_user_id	user_email	user_role_id	user_role_type
20	admin@gmail.com	ADMIN	1	ADMIN
24	extra@gmail.com	2	MEMBER	MEMBER
22	gmail@hotmail.com	2	MEMBER	MEMBER
23	hi@protonmail.com	2	MEMBER	MEMBER
19	tur99267@temple.edu	2	MEMBER	MEMBER
21	eyes@gmail.com	3	VIEW	VIEW

Result 6 X

Action Output

#	Time	Action	Message	Duration / Fetch
66	17:21:38	SELECT user_role_id, user_email FROM web_user ORDER BY us...	7 row(s) returned	0.017 sec / 0.000023 ...
67	17:22:46	SELECT user_role_id, user_email, web_user_role_type FRO...	Error Code: 1052. Column 'user_role_id' in SELECT is ambiguous	0.015 sec
68	17:22:59	SELECT web_user_role_id, user_email, web_user_role...	Error Code: 1054. Unknown column 'web_user_role_type' in 'SELECT'	0.015 sec
69	17:23:18	SELECT web_user_email, web_user_role_type FROM web_user ...	Error Code: 1054. Unknown column 'web_user_role_type' in 'SELECT'	0.013 sec
70	17:23:31	SELECT web_user_email, web_user_role_type FROM web_user ...	Error Code: 1052. Column 'user_role_id' in ORDER BY is ambiguous	0.016 sec
71	17:25:22	SELECT web_user_id, user_email, web_user_role_id, user_r...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use n...	0.013 sec
72	17:25:40	SELECT web_user_id, user_email, web_user_role_id, user_r...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use n...	0.014 sec
73	17:26:04	SELECT web_user_id, user_email, web_user_role_id, user_r...	Error Code: 1054. Unknown column 'user_email' in 'SELECT'	0.016 sec
74	17:27:41	SELECT web_user_id, user_email, web_user_role_id, user_r...	7 row(s) returned	0.014 sec / 0.000054 ...

Query Completed

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

MySQL Workbench interface showing a query execution for a table named 'books'.

**Query 5:**

```
1 • SELECT * FROM sp25_3308_tur99267.books
2 ORDER BY book_id;
```

**Result 5:**

#	book_id	isbn	book_title	book_img	pub_date	user_id
20	1234567890123		Winged Pandemic	pic.jpg	2022-0...	22
21	9876543210987		Clue of the Artificial Footprint	NULL	NULL	24
22	1234567891234		Shadows Sinking	NULL	NULL	22
23	9876543219876		Leather Dreams	NULL	2024-1...	22
24	5432167890456		Secret of the Mute Porter	NULL	NULL	22
25	123456789123		The Silhouette in the City	NULL	NULL	22
26	3210987654321		The Hand of the Traitor	test.png	NULL	24
27	7890987654321		Strike of Hyperion	NULL	NULL	22
28	4567812345678		North of Legend	NULL	NULL	19
29	9191234567891		Case of the Laughing Baboon	NULL	NULL	24

**Action Output:**

#	Time	Action	Message	Duration / Fetch
64	17:57:29	ALTER TABLE books ADD CONSTRAINT web_user_id FOREIGN KEY (web_user_id) REFERENCES web_user (user_id) ON DELETE CASCADE	Error Code: 1005. Can't create table 'sp25_3308_tur99267.books'. Error: duplicate key entry for table 'books'.	0.0218 sec
65	17:57:48	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267.books INNER JOIN web_user ON books.user_id = web_user.user_id	0 row(s) returned	0.0047 sec / 0.00001...
66	17:57:58	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267.books INNER JOIN web_user ON books.user_id = web_user.user_id	70 row(s) returned	0.0069 sec / 0.00004...
67	17:58:42	Apply changes to books	Changes applied	
68	18:00:22	SELECT * FROM sp25_3308_tur99267.books LIMIT 0, 1000	10 row(s) returned	0.0060 sec / 0.00001...
69	18:01:53	SELECT * FROM sp25_3308_tur99267.books ORDER BY book_id	10 row(s) returned	0.0075 sec / 0.00001...

g) "OTHER" JOINED WITH WEB\_USER all rows, certain columns, sorted.

MySQL Workbench interface showing a query execution for a table named 'books'.

**Query 5:**

```
1 • SELECT books.book_title, web_user.user_email
2 FROM sp25_3308_tur99267.books INNER JOIN web_user
3 ON books.user_id = web_user.user_id;
```

**Result 3:**

#	book_title	user_email
1	Winged Pandemic	gmail@hotmail.com
2	Clue of the Artificial Footprint	extra@gmail.com
3	Shadows Sinking	gmail@hotmail.com
4	Leather Dreams	gmail@hotmail.com
5	Secret of the Mute Porter	extra@gmail.com
6	The Silhouette in the City	gmail@hotmail.com
7	The Hand of the Traitor	extra@gmail.com
8	Strike of Hyperion	gmail@hotmail.com
9	North of Legend	tur99267@temple.edu
10	Case of the Laughing Baboon	extra@gmail.com

**Action Output:**

#	Time	Action	Message	Duration / Fetch
64	17:57:48	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267.books INNER JOIN web_user ON books.user_id = web_user.user_id	0 row(s) returned	0.0047 sec / 0.00001...
65	17:57:58	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267.books INNER JOIN web_user ON books.user_id = web_user.user_id	70 row(s) returned	0.0069 sec / 0.00004...
66	17:58:42	Apply changes to books	Changes applied	
67	18:00:22	SELECT * FROM sp25_3308_tur99267.books LIMIT 0, 1000	10 row(s) returned	0.0060 sec / 0.00001...
68	18:01:53	SELECT * FROM sp25_3308_tur99267.books ORDER BY book_id	10 row(s) returned	0.0075 sec / 0.00001...
69	18:05:13	SELECT books.book_title, web_user.user_email FROM sp25_3308_tur99267.books INNER JOIN web_user ON books.user_id = web_user.user_id	10 row(s) returned	0.0065 sec / 0.00001...

h) "OTHER" JOINED WITH WEB\_USER some rows, certain columns, sorted.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 • SELECT books.book_title, web_user.user_email
2 FROM sp25_3308_tur99267.books, web_user
3 WHERE books.user_id = web_user.web_user_id && books.isbn > 1500000000000;
```

The results pane displays the following data:

#	book_title	user_email
1	The Hand of the Traitor	extra@gmail.com
2	North of Legend	tur99267@temple.edu
3	Secret of the Mute Porter	extra@gmail.com
4	Strike of Hyperion	gmail@hotmail.com
5	Case of the Laughing Baboon	extra@gmail.com
6	Clue of the Artificial Footprint	extra@gmail.com
7	Leather Dreams	gmail@hotmail.com

The Action Output pane shows the following log:

#	Time	Action	Message	Duration / Fetch
66	17:58:42	Apply changes to books	Changes applied	
67	18:00:22	SELECT * FROM sp25_3308_tur99267.books LIMIT 0, 1000	10 row(s) returned	0.0060 sec / 0.00001...
68	18:01:53	SELECT * FROM sp25_3308_tur99267.books ORDER BY book_l...	10 row(s) returned	0.0075 sec / 0.00001...
69	18:05:13	SELECT books.book_title, web_user.user_email FROM sp25_33...	10 row(s) returned	0.0065 sec / 0.00001...
70	18:06:30	SELECT books.book_title, web_user.user_email FROM sp25_33...	Error Code: 1064. You have an error in your SQL synta...	0.0066 sec
71	18:06:43	SELECT books.book_title, web_user.user_email FROM sp25_33...	7 row(s) returned	0.0070 sec / 0.00001...

The status bar at the bottom indicates "Query Completed".