

Edward Keegan

Web Apps Lab04

9/16/22

1. Edward Keegan

2. http://cis-linux2.temple.edu:8080/FA22_3308_tul66739/

3. user_role TABLE DESIGN

Query 1 user_role - Table user_role - Table

Table Name: user_role Schema: FA22_3308_tul66739

Collation: Schema Default Engine: InnoDB

Comments:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
user_role_id	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
user_role_type	VARCHAR(10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4. web_user TABLE DESIGN and FOREIGN KEY

Table Name: web_user Schema: FA22_3308_tul66739

Collation: latin1 - default collation Engine: InnoDB

Comments:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
web_user_id	INT(11)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
user_email	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
user_password	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
image	VARCHAR(500)	<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
membership_fee	DECIMAL(10,2)	<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
birthday	DATE	<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"/>	NULL
user_role_id	INT(11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Query 1 user_role - Table user_role - Table web_user - Table

Limit to 1000 rows

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

5. "OTHER" TABLE DESIGN and FOREIGN KEY

Query 1 web_user user_role web_user homes - Table user_role - Table user_role web_user - Table homes web_user homes

Table Name: homes Schema: FA22_3308_tul66739

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
homes_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"/>	
homes_address	VARCHAR(100)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NULL
homes_type	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
homes_img	VARCHAR(300)	<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
price	INT(12)	<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
beds	DECIMAL(4,2)	<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
lot_size_acres	DECIMAL(4,2)	<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
year_built	INT(11)	<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
listing_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
web_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"/>	

Column Name: Collation: Table Default Comments:

Data Type: DECIMAL(4,2) Default: NULL Storage: ☐ Virtual ☐ Stored ☐ Primary Key ☐ Not Null ☐ Binary ☐ Unsigned ☐ Auto Increment ☐ Generated

Columns Indexes Foreign Keys Triggers Partitioning Options

Query 1 web_user web_user user_role web_user homes - Table user_role - Table user_role web_user - Table

```

1 alter table homes add foreign key (web_user_id) references web_user (web_user_id);
2

```

Output

#	Time	Action	Message
1	16:19:02	SELECT web_user_id, user_email, user_password, image, membership_fee, birthday, web_user_id, user_role_id, user_role_type FROM web_user, ...	5 row(s) returned
2	00:29:29	SELECT web_user_id, user_role_id FROM web_user, user_role ORDER BY web_user_id, user_role_id LIMIT 0, 1000	20 row(s) returned
3	00:53:50	SELECT * FROM FA22_3308_tul66739 user_role LIMIT 0, 1000	4 row(s) returned
4	01:08:49	Apply changes to homes	Changes applied
5	01:10:17	alter table homes add foreign key (web_user_id) references web_user (web_user_id)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0

6. DATA ENTRY ERRORS

a) Error: Duplicate user_role PK

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:
INSERT INTO `FA22_3308_tul66739`.`user_role` (`user_role_id`, `user_role_type`) VALUES ('1',
'Admin');
INSERT INTO `FA22_3308_tul66739`.`user_role` (`user_role_id`, `user_role_type`) VALUES ('2',
'Member');
INSERT INTO `FA22_3308_tul66739`.`user_role` (`user_role_id`, `user_role_type`) VALUES ('2',
'View');

Operation failed: There was an error while applying the SQL script to the database.
ERROR 1062: 1062: Duplicate entry '2' for key 'PRIMARY'
SQL Statement:
INSERT INTO `FA22_3308_tul66739`.`user_role` (`user_role_id`, `user_role_type`) VALUES ('2',
'View')
```

b) Error: Invalid user_role FK in web_user record


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

Operation failed: There was an error while applying the SQL script to the database.
Executing:
INSERT INTO `FA22_3308_tul66739`.`web_user` (`user_email`, `user_password`,
`membership_fee`, `user_role_id`) VALUES ('josh', 'josh', '25', '4');

ERROR 1452: 1452: Cannot add or update a child row: a foreign key constraint fails
(`FA22_3308_tul66739`.`web_user`, CONSTRAINT `web_user_ibfk_1` FOREIGN KEY (`user_role_id`)
REFERENCES `user_role` (`user_role_id`))
SQL Statement:
INSERT INTO `FA22_3308_tul66739`.`web_user` (`user_email`, `user_password`,
`membership_fee`, `user_role_id`) VALUES ('josh', 'josh', '25', '4')

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

Review SQL Script

Apply SQL Script

Applying SQL script to the database

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

Execute SQL Statements

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

Message Log

Operation failed: There was an error while applying the SQL script to the database.
Executing:
DELETE FROM 'FA22_3308_tul66739' ."user_role" WHERE 'user_role_id' =0;

ERROR 1451: 1451: Cannot delete or update a parent row: a foreign key constraint exists
('FA22_3308_tul66739'."web_user", CONSTRAINT 'web_user_ibfk_1' FOREIGN KEY ('user_role_id')
REFERENCES 'user_role' ('user_role_id'))
SQL Statement:
DELETE FROM 'FA22_3308_tul66739' ."user_role" WHERE 'user_role_id' =0

d) Invalid web_user FK in “other” record

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

```
Operation failed: There was an error while applying the SQL script to the database.  
Executing:  
INSERT INTO `FA22_3308_tul66739`.`homes` (`homes_address`, `web_user_id`) VALUES ('1805  
montgomery ave', '42');  
  
ERROR 1452: 1452: Cannot add or update a child row: a foreign key constraint fails  
(`FA22_3308_tul66739`.`homes`, CONSTRAINT `homes_ibfk_2` FOREIGN KEY (`web_user_id`)  
REFERENCES `web_user` (`web_user_id`))  
SQL Statement:  
INSERT INTO `FA22_3308_tul66739`.`homes` (`homes_address`, `web_user_id`) VALUES ('1805  
montgomery ave', '42')
```

Hide Logs

Back

Finish

Cancel

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

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:  
DELETE FROM `FA22_3308_tul66739`.`web_user` WHERE `web_user_id` = '29';  
  
Operation failed: There was an error while applying the SQL script to the database.  
ERROR 1451: 1451: Cannot delete or update a parent row: a foreign key constraint fails  
(`FA22_3308_tul66739`.`homes`, CONSTRAINT `homes_ibfk_2` FOREIGN KEY (`web_user_id`)  
REFERENCES `web_user` (`web_user_id`))  
SQL Statement:  
DELETE FROM `FA22_3308_tul66739`.`web_user` WHERE `web_user_id` = '29'
```

Hide Logs

Back

Finish

Cancel

7. SELECT STATEMENTS

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

The screenshot displays a database management interface with a query editor and a results pane. The query editor shows a SQL statement to select all rows from the 'user_role' table, limited to 1000 rows. The results pane shows a table with two columns: 'user_role_id' and 'user_role_type'. The table contains four rows of data. Below the results pane, the 'Output' section shows a log of actions performed, including three successful SELECT statements and one failed DELETE statement.

Query 1 user_role web_user user_role x

Limit to 1000 rows

1 • SELECT * FROM FA22_3308_tul66739.user_role;

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

user_role_id	user_role_type
0	ADMIN
1	MEMBER
3	TEMP
2	VIEW

user_role 2 x

Output

Action Output

#	Time	Action	Message
✓ 1	17:03:22	SELECT * FROM FA22_3308_tul66739.user_role LIMIT 0, 1000	3 row(s) returned
✓ 2	17:03:27	SELECT * FROM FA22_3308_tul66739.web_user LIMIT 0, 1000	4 row(s) returned
✓ 3	17:08:03	SELECT * FROM FA22_3308_tul66739.user_role LIMIT 0, 1000	3 row(s) returned
✗ 4	17:08:33	DELETE FROM 'FA22_3308_tul66739'.user_role WHERE 'user_role_id'='0'	1451: Cannot delete or update a parent row: a foreign key constraint fails
✓ 5	17:10:39	SELECT * FROM FA22_3308_tul66739.user_role LIMIT 0, 1000	4 row(s) returned

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

The screenshot shows a database query tool interface. The query editor at the top contains the following SQL statement:

```
1 • SELECT * FROM FA22_3308_tul66739.web_user;
```

The results are displayed in a table with the following columns: web_user_id, user_email, user_password, image, membership_fee, birthday, and user_role_id. The data is sorted by web_user_id.

web_user_id	user_email	user_password	image	membership_fee	birthday	user_role_id
26	ioe	ioe	http://...	123.33	1990-11-11	0
27	sam	sam	NULL	NULL	2012-11-11	1
28	andrew		NULL	45.22	NULL	1
29	sara		NULL	34.24	1999-06-12	2
31	sally		NULL	NULL	NULL	2
NULL	NULL	NULL	NULL	NULL	NULL	NULL

The bottom section shows the 'Action Output' table, which records the execution of the query:

#	Time	Action	Message
1	17:03:22	SELECT * FROM FA22_3308_tul66739.user_role LIMIT 0, 1000	3 row(s) returned
2	17:03:27	SELECT * FROM FA22_3308_tul66739.web_user LIMIT 0, 1000	4 row(s) returned

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

The screenshot shows a database query tool interface. The query editor at the top contains the following SQL statement:

```
1 • SELECT web_user_id, user_role.user_role_id from web_user, user_role
2 ORDER BY web_user_id, user_role.user_role_id;
3
```

The results are displayed in a table with the following columns: web_user_id and user_role_id. The data is sorted by web_user_id and user_role_id.

web_user_id	user_role_id
26	0
26	1
26	2
26	3
27	0
27	1
27	2
27	3
28	0
28	1
28	2
28	3
29	0
29	1
29	2
29	3
31	0
31	1
31	2
31	3

The bottom section shows the 'Action Output' table, which records the execution of the query:

#	Time	Action	Message
1	16:19:02	SELECT web_user_id, user_email, user_password, image, membership_fee, birthday, web_user.user_role_id, user_role_type FROM web_user, ...	5 row(s) returned
2	00:29:29	SELECT web_user_id, user_role.user_role_id from web_user, user_role ORDER BY web_user_id, user_role.user_role_id LIMIT 0, 1000	20 row(s) returned

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

Query 1 web_user user_role web_user homes - table user_role - table user_role web_user - table homes web_user homes

1 • SELECT * FROM homes;

Result Grid

homes_id	homes_address	homes_type	homes_img	price	beds	baths	lot_size_acres	year_built	Listing_date	web_user_id
25	123 arole st.	RES	home.jpg	600000	4.00	2.00	2.50	1982	2021-12-11	26
26	296 boxwood ave.	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	27
27	1021 diamond st.	RES	biohouse.jpg	850000	7.00	4.50	0.50	2021	2021-06-07	27
28	1600 spruce st.	RES	reallvnicthouse.jpg	1200000	8.00	8.50	0.25	2008	2019-06-09	28
29	502 delaware ave.	COM	warehouse.jpg	425000	0.00	0.00	0.85	1999	2022-02-08	28
30	222 norris st.	Multi-Familv	hose.jpg	280000	4.00	2.00	2.85	1891	2019-07-09	26
31	333 walnut st.	RES	NULL	450000	3.00	2.00	0.45	1986	2021-09-21	27
32	444 pine st.	RES	NULL	NULL	4.00	NULL	1.20	NULL	NULL	26
33	1654 broad st.	COM	salon.jpg	850000	NULL	NULL	NULL	2012	NULL	28
34	2136 n17th st.	Multi-Familv	home.jpg	750000	NULL	NULL	NULL	2018	NULL	29
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

homes 1 homes 3 x

Output

Action Output

#	Time	Action	Message
1	02:05:44	SELECT * FROM homes LIMIT 0, 1000	10 row(s) returned

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

Query 1 web_user user_role web_user homes - table user_role - table user_role web_user - table homes web_user homes

1 • SELECT homes_address, user_email
2 from homes, web_user
3 where homes.web_user_id = web_user.web_user_id
4 order by homes_address, user_email;

Result Grid

homes_address	user_email
1021 diamond st.	sam@realtor.com
123 arole st.	ioe@realtor.com
1600 spruce st.	andrew@realtor.com
1654 broad st.	andrew@realtor.com
2136 n17th st.	sara@realtor.com
222 norris st.	ioe@realtor.com
296 boxwood ave.	sam@realtor.com
333 walnut st.	sam@realtor.com
444 pine st.	ioe@realtor.com
502 delaware ave.	andrew@realtor.com

Result 10 x

Output

Action Output

#	Time	Action	Message
1	02:35:57	SELECT homes_address, user_email from homes, web_user where homes.web_user_id = web_user.web_user_id order by homes_address, user_email LI...	10 row(s) returned

Query 1 x web_user user_role homes - Table user_role - Table web_user - Table homes web_user homes

```

1 SELECT homes_address, user_email
2 from homes, web_user
3 where homes.web_user_id = web_user.web_user_id and homes_type = 'RES'
4 order by homes_address, user_email;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [f](#)

homes_address	user_email
1021 diamond st.	sam@realtor.com
123 aocle st.	ioe@realtor.com
1600 soruce st.	andrew@realtor.com
333 walnut st.	sam@realtor.com
444 pine st.	ioe@realtor.com

Result 11 x

Output

Action Output

#	Time	Action	Message
1	02:35:57	SELECT homes_address, user_email from homes, web_user where homes.web_user_id = web_user.web_user_id order by homes_address, user_email LI...	10 row(s) returned
2	02:58:47	SELECT homes_address, user_email from homes, web_user where homes.web_user_id = web_user.web_user_id and homes_type = 'RES' order by homes...	Error Code: 1054. Unknown column 'RES' in 'where clause'
3	02:58:58	SELECT homes_address, user_email from homes, web_user where homes.web_user_id = web_user.web_user_id and homes_type = 'RES' order by home...	5 row(s) returned