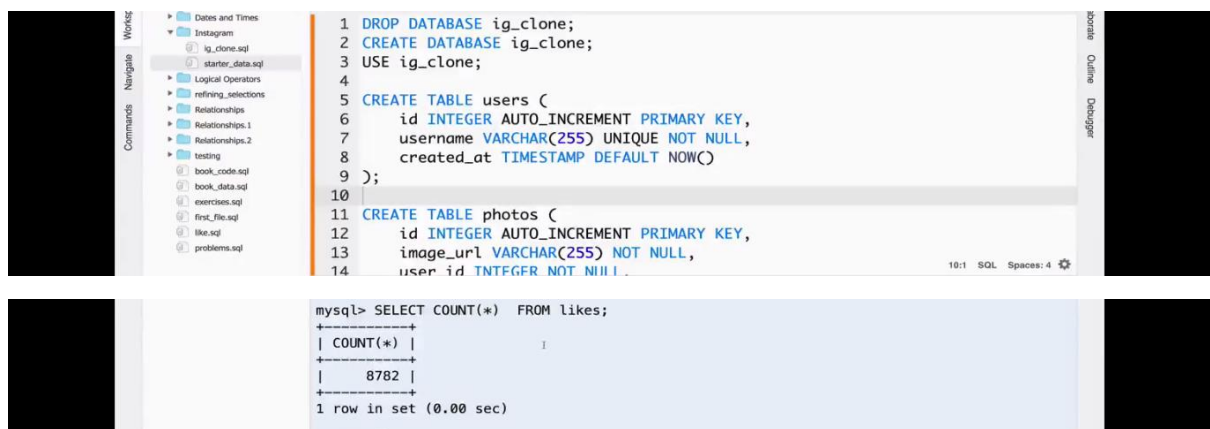


Lesson 15- working with lots of Instagram data

- 1- Loading the Instagram jumbo dataset
- 2- Instagram clone challenge 1
- 3- Instagram clone challenge 1 solution
- 4- Instagram clone challenge 2
- 5- Instagram clone challenge 2 solution
- 6- Instagram clone challenge 3
- 7- Instagram clone challenge 3 solution
- 8- Instagram clone challenge 4
- 9- Instagram clone challenge 4 solution
- 10- Instagram clone challenge 5
- 11- Instagram clone challenge 5 solution
- 12- Instagram clone challenge 6
- 13- Instagram clone challenge 6 solution
- 14- Instagram clone challenge 7
- 15- Instagram clone challenge 7 solution

Create database



The screenshot shows a SQL IDE interface. On the left, a file explorer lists various SQL files, including 'ig_clone.sql'. The main editor displays SQL code to create a database and tables. The code is as follows:

```
1 DROP DATABASE ig_clone;
2 CREATE DATABASE ig_clone;
3 USE ig_clone;
4
5 CREATE TABLE users (
6   id INTEGER AUTO_INCREMENT PRIMARY KEY,
7   username VARCHAR(255) UNIQUE NOT NULL,
8   created_at TIMESTAMP DEFAULT NOW()
9 );
10
11 CREATE TABLE photos (
12   id INTEGER AUTO_INCREMENT PRIMARY KEY,
13   image_url VARCHAR(255) NOT NULL,
14   user_id INTEGER NOT NULL
```

Below the code editor, a terminal window shows the execution of a query and its result:

```
mysql> SELECT COUNT(*) FROM likes;
+-----+
| COUNT(*) |
+-----+
|      8782 |
+-----+
1 row in set (0.00 sec)
```

Step 2

Ask Some Questions

Challenges 1

We want to reward our users who have been around the longest.

Find the 5 oldest users.

1 -- 1. Finding 5 oldest users
2
3 SELECT *
4 FROM users;

```
mysql> SELECT *  
-> FROM users;
```

id	username	created_at
1	Kenton_Kirlin	2017-02-16 18:22:10
2	Andre_Purdy85	2017-04-02 17:11:21

1 -- 1. Finding 5 oldest users
2
3 SELECT *
4 FROM users
5 ORDER BY created_at;

id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:29
63	Elenor88	2016-05-08 01:30:40
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:25
71	Nia_Haag	2016-05-14 15:38:50
40	Rafael_Hickle2	2016-05-19 09:51:25

1 -- 1. Finding 5 oldest users
2
3 SELECT *
4 FROM users
5 ORDER BY created_at
6 LIMIT 5;

id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:29
63	Elenor88	2016-05-08 01:30:40
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:25

5 rows in set (0.00 sec)

Challenge 2

What day of the week do most users register on?
We need to figure out when to schedule an ad campaign

7
8 -- 2. Most Popular Registration Date
9 SELECT *
10 FROM users;

42	JaneEArmstrong	2016-10-08 07:27:44
44	Seth46	2016-07-07 11:40:26
45	David.Osinski47	2017-02-05 21:23:37
46	Malinda_Streich	2016-07-09 21:37:07
47	Harrison.Beatty50	2016-09-02 03:48:38
48	Granville_Kutch	2016-06-26 03:10:22
49	Morgan.Kassulke	2016-10-30 12:42:31
50	Gerard79	2016-08-23 19:47:44
51	Mariano_Koch3	2017-04-17 14:14:45

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql

```

8 -- 2. Most Popular Registration Date
9 SELECT
10     username,
11     DAYNAME(created_at)
12 FROM users;

```

Debugger

Justin.Gaylord27	Sunday
Dereck65	Thursday
Alexandro35	Thursday
Jaclyn81	Wednesday
Billy52	Monday
Annalise.McKenzie16	Wednesday
Norbert_Carroll35	Tuesday
Odessa2	Monday
...	...

Commands

- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql

```

8 -- 2. Most Popular Registration Date
9 SELECT
10     username,
11     DAYNAME(created_at) AS day
12 FROM users
13 GROUP BY day;

```

Debugger

Gus93	Friday
Kassandra_Homenick	Monday
Arely_Bogan63	Saturday
Andre_Purdy85	Sunday
Kenton_Kirlin	Thursday
Harley_Lind18	Tuesday
Aniya_Hackett	Wednesday

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql

```

8 -- 2. Most Popular Registration Date
9 SELECT
10     DAYNAME(created_at) AS day,
11     COUNT(*)
12 FROM users
13 GROUP BY day;

```

Debugger

Friday	15
Monday	14
Saturday	12
Sunday	16
Thursday	16
Tuesday	14
Wednesday	13

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql
- first_file.sql

```

8 -- 2. Most Popular Registration Date
9 SELECT
10     DAYNAME(created_at) AS day,
11     COUNT(*) AS total
12 FROM users
13 GROUP BY day
14 ORDER BY total;

```

Debugger

day	total
Saturday	12
Wednesday	13
Monday	14
Tuesday	14
Friday	15
Thursday	16
Sunday	16

Commands

- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql
- first_file.sql

```

8 -- 2. Most Popular Registration Date
9 SELECT
10     DAYNAME(created_at) AS day,
11     COUNT(*) AS total
12 FROM users
13 GROUP BY day
14 ORDER BY total DESC;

```

Debugger

day	total
Thursday	16
Sunday	16
Friday	15
Monday	14
Tuesday	14
Wednesday	13
Saturday	12

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql
- first_file.sql
- like.sql

```

8 -- 2. Most Popular Registration Date
9 SELECT
10     DAYNAME(created_at) AS day,
11     COUNT(*) AS total
12 FROM users
13 GROUP BY day
14 ORDER BY total DESC
15 LIMIT 2;
--> LIMIT 2;

```

Debugger

day	total
Thursday	16
Sunday	16

2 rows in set (0.01 sec)

Challenge 3

We want to target our inactive users with an email campaign.
Find the users who have never posted a photo

<ul style="list-style-type: none"> testing book_code.sql book_data.sql exercises.sql first_file.sql 	<pre> 17 -- 3. Identify Inactive Users (users with no photos) 18 SELECT * FROM users; 19 </pre>																												
	<table> <tbody> <tr><td>61</td><td>Jaysonec</td><td>2016-10-14 19:10:34</td></tr> <tr><td>62</td><td>Ressie_Stanton46</td><td>2016-12-20 15:09:08</td></tr> <tr><td>63</td><td>Elenor88</td><td>2016-05-08 01:30:40</td></tr> <tr><td>64</td><td>Florence99</td><td>2016-10-06 23:08:30</td></tr> <tr><td>65</td><td>Adelle96</td><td>2016-10-01 00:37:57</td></tr> <tr><td>66</td><td>Mike_Auer39</td><td>2016-07-01 17:36:14</td></tr> <tr><td>67</td><td>Emilio_Bernier52</td><td>2016-05-06 13:04:29</td></tr> <tr><td>68</td><td>Franco_Keebler64</td><td>2016-11-13 20:09:26</td></tr> <tr><td>69</td><td>Karley_Bosco</td><td>2016-06-24 23:38:52</td></tr> </tbody> </table>	61	Jaysonec	2016-10-14 19:10:34	62	Ressie_Stanton46	2016-12-20 15:09:08	63	Elenor88	2016-05-08 01:30:40	64	Florence99	2016-10-06 23:08:30	65	Adelle96	2016-10-01 00:37:57	66	Mike_Auer39	2016-07-01 17:36:14	67	Emilio_Bernier52	2016-05-06 13:04:29	68	Franco_Keebler64	2016-11-13 20:09:26	69	Karley_Bosco	2016-06-24 23:38:52	
61	Jaysonec	2016-10-14 19:10:34																											
62	Ressie_Stanton46	2016-12-20 15:09:08																											
63	Elenor88	2016-05-08 01:30:40																											
64	Florence99	2016-10-06 23:08:30																											
65	Adelle96	2016-10-01 00:37:57																											
66	Mike_Auer39	2016-07-01 17:36:14																											
67	Emilio_Bernier52	2016-05-06 13:04:29																											
68	Franco_Keebler64	2016-11-13 20:09:26																											
69	Karley_Bosco	2016-06-24 23:38:52																											

testing

book_code.sql

book_data.sql

exercises.sql

first_file.sql

```
17 -- 3. Identify Inactive Users (users with no photos)
18 SELECT * FROM users;
19 SELECT * FROM photos;
20
230 https://dustin.net 88 2017-05-06 18:30:41
231 https://mariano.net 88 2017-05-06 18:30:41
232 https://brittany.org 88 2017-05-06 18:30:41
233 https://madaline.name 88 2017-05-06 18:30:41
234 https://devonte.name 88 2017-05-06 18:30:41
235 https://blanche.net 88 2017-05-06 18:30:41
236 http://cali.net 88 2017-05-06 18:30:41
237 http://mekhi.name 88 2017-05-06 18:30:41
238 http://adela.com 88 2017-05-06 18:30:41
239 https://devan.com 92 2017-05-06 18:30:41
```

Relationships.1

Relationships.2

testing

book_code.sql

book_data.sql

exercises.sql

first_file.sql

17 -- 3. Identify Inactive Users (users with no photos)

18 SELECT *

19 FROM users

20 INNER JOIN photos

21 ON users.id = photos.user_id;

22

95	Nicole71	2016-05-09 17:30:22	245	http://ayden.name
95	Nicole71	2016-05-09 17:30:22	246	https://kathleen.biz
95	2017-05-06 18:30:41			
96	Keenan.Schamberger60	2016-08-28 14:57:28	247	https://helmer.org
96	2017-05-06 18:30:41			
96	Keenan.Schamberger60	2016-08-28 14:57:28	248	https://maggie.info
96	2017-05-06 18:30:41			
96	Keenan.Schamberger60	2016-08-28 14:57:28	249	https://cecilia.net

Relationships.1

Relationships.2

testing

book_code.sql

book_data.sql

exercises.sql

first_file.sql

```
17 -- 3. Identify Inactive Users (users with no photos)
18 SELECT username, image_url
19 FROM users
20 INNER JOIN photos
21 ON users.id = photos.user_id;
22
```

Justina.Gaylord27	https://henderson.com
Justina.Gaylord27	http://bonnie.info
Justina.Gaylord27	http://kennith.net
Justina.Gaylord27	http://camille.name
Kaley9	https://jensen.name
Kaley9	http://virginia.org
Karley_Bosco	http://reva.com
Katarina.Dibbert	https://ford.biz

Comm	<ul style="list-style-type: none"> Relationships Relationships.1 Relationships.2 testing book_code.sql book_data.sql exercises.sql first_file.sql 	<pre> 16 17 -- 3. Identify Inactive Users (users with no photos) 18 SELECT username, image_url 19 FROM users 20 LEFT JOIN photos 21 ON users.id = photos.user_id; 22 </pre>	<pre> Rick29 https://celestino.name Rick29 http://violet.info Rick29 http://nigel.biz Rocio33 NULL Sam52 http://blanca.org Sam52 http://delpha.com Seth46 https://olga.org Seth46 https://donavon.org Seth46 http://moses.biz </pre>
------	---	---	--

Comm

Relationships.1

Relationships.2

testing

book_code.sql

book_data.sql

exercises.sql

first_file.sql

like.sql

```
17 -- 3. Identify Inactive Users (users with no photos)
18 SELECT username, image_url
19 FROM users
20 LEFT JOIN photos
21 ON users.id = photos.user_id
22 WHERE photos.id IS NULL;
```

username	image_url
Aniya_Hackett	NULL
Bartholome.Bernhard	NULL
Bethany20	NULL
Darby_Herzog	NULL
David.Osinski47	NULL
Duane60	NULL

Comm	<ul style="list-style-type: none"> Relationships.1 Relationships.2 testing book_code.sql book_data.sql exercises.sql first_file.sql like.sql 	<pre> 17 -- 3. Identify Inactive Users (users with no photos) 18 SELECT username 19 FROM photos 20 RIGHT JOIN users 21 ON users.id = photos.user_id 22 WHERE photos.id IS NULL; </pre>	<pre> Bethany20 Darby_Herzog David.Osinski47 Duane60 Esmeralda.Mraz57 Esther.Zulauf61 Franco_Keebler64 Hulda.Macejkovic </pre>
------	--	--	--

Challenge 4

We're running a new contest to see who can get the most likes on a single photo.

WHO WON??!!

<ul style="list-style-type: none"> book_data.sql exercises.sql first_file.sql like.sql 	<pre> 24 -- 4. Identify most popular photo (and user who created it) 25 SELECT * 26 FROM photos; </pre>	<pre> 244 http://freeda.biz 94 2017-05-06 18:30:41 245 http://ayden.name 95 2017-05-06 18:30:41 246 https://kathleen.biz 95 2017-05-06 18:30:41 247 https://helmer.org 96 2017-05-06 18:30:41 248 https://maggie.info 96 2017-05-06 18:30:41 249 https://cecilia.net 96 2017-05-06 18:30:41 250 http://ayla.org 97 2017-05-06 18:30:41 251 https://elyssa.biz 97 2017-05-06 18:30:41 252 http://jennie.com 98 2017-05-06 18:30:41 </pre>
--	---	--

<ul style="list-style-type: none"> first_file.sql like.sql relationships.sql 	<pre> 27 28 SELECT * FROM likes; </pre>	<pre> 100 245 2017-05-06 18:30:42 100 246 2017-05-06 18:30:42 100 248 2017-05-06 18:30:42 100 249 2017-05-06 18:30:42 100 255 2017-05-06 18:30:42 </pre> <p>8782 rows in set (0.00 sec)</p>
---	---	---

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql

```

24 -- 4. Identify most popular photo (and user who created it)
25 SELECT *
26 FROM photos
27 INNER JOIN likes
28     ON likes.photo_id = photos.id;
29

```

257	http://dedrick.info	100	2017-05-06 18:30:41	95	257	2017-05-06 18:30:42
257	http://dedrick.info	100	2017-05-06 18:30:41	97	257	2017-05-06 18:30:42

8782 rows in set (0.12 sec)

Debugger

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql

```

24 -- 4. Identify most popular photo (and user who created it)
25 SELECT photos.id, photos.image_url, likes.user_id
26 FROM photos
27 INNER JOIN likes
28     ON likes.photo_id = photos.id;
29

```

257	http://dedrick.info	48
257	http://dedrick.info	54
257	http://dedrick.info	57
257	http://dedrick.info	60
257	http://dedrick.info	61
257	http://dedrick.info	65
257	http://dedrick.info	66
257	http://dedrick.info	70
257	http://dedrick.info	71

Debugger

Commands

- solutions.sql
- starter_data.sql
- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql

```

24 -- 4. Identify most popular photo (and user who created it)
25 SELECT
26     photos.id,
27     photos.image_url,
28     likes.user_id
29 FROM photos
30 INNER JOIN likes
31     ON likes.photo_id = photos.id
32 GROUP BY photos.id;
33

```

253	http://ryleigh.info	3
254	https://darien.name	5
255	https://xzavier.org	5
256	https://kaela.name	3
257	http://dedrick.info	3

257 rows in set (0.01 sec)

Outline Debugger

Commands

- solutions.sql
- starter_data.sql
- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql

```

24 -- 4. Identify most popular photo (and user who created it)
25 SELECT
26     photos.id,
27     photos.image_url,
28     COUNT(*)
29 FROM photos
30 INNER JOIN likes
31     ON likes.photo_id = photos.id
32 GROUP BY photos.id;
33

```

236	http://cali.net	30
237	http://mekhi.name	32
238	http://adela.com	27
239	https://devan.com	31
240	https://jarrett.name	30
241	https://sid.biz	37
242	https://jadyn.name	33
243	https://erik.com	35
244	http://freda.biz	40
245	https://auden.name	33

Outline Debugger

Commands

- ig_code.sql
- solutions.sql
- starter_data.sql
- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql
- first_file.sql

```

24 -- 4. Identify most popular photo (and user who created it)
25 SELECT
26     photos.id,
27     photos.image_url,
28     COUNT(*) AS total
29 FROM photos
30 INNER JOIN likes
31     ON likes.photo_id = photos.id
32 GROUP BY photos.id
33 ORDER BY total;
34

```

113	https://darwin.net	36
177	https://nolan.name	36
257	http://dedrick.info	36
17	http://annamae.name	36
2	https://shanon.org	36
211	https://dimitri.info	36
116	https://maymie.net	36
53	http://collin.com	36
85	http://fabiola.org	36

Outline Debugger

Commands

Navigate

SQL_Access.sql

① solutions.sql

② starter_data.sql

Logical Operators

refining_selections

Relationships

Relationships.1

Relationships.2

testing

③ book_code.sql

④ book_data.sql

⑤ exercises.sql

⑥ first_file.sql

like url

24 -- 4. Identify most popular photo (and user who created it)

25 SELECT

26 photos.id,

27 photos.image_url,

28 COUNT(*) AS total

29 FROM photos

30 INNER JOIN likes

31 ON likes.photo_id = photos.id

32 GROUP BY photos.id

33 ORDER BY total DESC;

193 | https://javonte.org | 30 |

179 | http://ora.net | 30 |

132 | http://kailee.org | 30 |

184 | http://rico.biz | 30 |

216 | http://deontae.org | 30 |

92 | http://lacy.biz | 29 |

108 | http://boris.biz | 29 |

12 | http://felicity.name | 29 |

Outline

Debugger

The screenshot shows a SQL editor with a query to find the most liked photo. The query is:

```
SELECT
  photos.id,
  photos.image_url,
  COUNT(*) AS total
FROM photos
INNER JOIN likes
  ON likes.photo_id = photos.id
GROUP BY photos.id
ORDER BY total DESC
LIMIT 1;
```

The results show the top photo with ID 159 and URL http://jedediah.net, having 31 likes.

```
Commands      | 39 -- Calculate avg number of photos per user
               | 40
               | 41 total number of photos / total number of users
               | 42 SELECT COUNT(*) FROM photos
               | 43
               |
               | --> ;
               |
               | +-----+
               | | COUNT(*) |
               | +-----+
               | |      257 |
               | +-----+
               |
               | 1 row in set (0.00 sec)
```

Commands

- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql

```

38
39 -- Calculate avg number of photos per user
40
41 total number of photos / total number of users
42 SELECT COUNT(*) FROM photos;
43 SELECT COUNT(*) FROM users;
44
mysql> SELECT COUNT(*) FROM users;
+-----+
| COUNT(*) |
+-----+
|      100 |
+-----+
1 row in set (0.00 sec)

```

Debugger

Commands

- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql

```

39 -- Calculate avg number of photos per user
40
41 -- total number of photos / total number of users
42 SELECT
43 (SELECT COUNT(*) FROM photos) / (SELECT COUNT(*) FROM users);
44
--> (SELECT COUNT(*) FROM photos) / (SELECT COUNT(*) FROM users);
+-----+
| (SELECT COUNT(*) FROM photos) / (SELECT COUNT(*) FROM users) |
+-----+
|                                2.5700 |
+-----+
1 row in set (0.01 sec)

```

Debugger

Commands

- Logical Operators
- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql

```

39 -- Calculate avg number of photos per user
40
41 -- total number of photos / total number of users
42 SELECT
43 (SELECT COUNT(*) FROM photos) / (SELECT COUNT(*) FROM users) AS avg;
44
--> (SELECT COUNT(*) FROM photos) / (SELECT COUNT(*) FROM users) AS avg;
+-----+
| avg |
+-----+
| 2.5700 |
+-----+
1 row in set (0.00 sec)

```

Debugger

Challenge 6

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql

```

44
45 -- 6. Five Most popular hashtags
46
47 SELECT * FROM tags;
48
10 | dreamy | 2017-05-06 18:30:42 |
11 | lol | 2017-05-06 18:30:42 |
12 | happy | 2017-05-06 18:30:42 |
13 | fun | 2017-05-06 18:30:42 |
14 | style | 2017-05-06 18:30:42 |
15 | hair | 2017-05-06 18:30:42 |
16 | fashion | 2017-05-06 18:30:42 |
17 | party | 2017-05-06 18:30:42 |
18 | concert | 2017-05-06 18:30:42 |
19 | drink | 2017-05-06 18:30:42 |

```

Debugger

Commands

- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT * FROM tags;
48 SELECT * FROM photo_tags;
49
155 | 21 |
157 | 21 |
163 | 21 |
171 | 21 |
182 | 21 |
184 | 21 |
185 | 21 |
188 | 21 |
197 | 21 |

```

Debugger

A brand wants to know which
hashtags to use in a post
What are the top 5 most
commonly used hashtags?

Comm

- relationships
- relationships.1
- relationships.2
- testing
- book_code.sql
- book_data.sql
- searches.sql
- first_file.sql
- flow.sql
- problems.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT *
48 FROM photo_tags
49 JOIN tags
50   ON photo_tags.tag_id = tags.id;
51

```

SQL

Comm

- relationships
- relationships.1
- relationships.2
- testing
- book_code.sql
- book_data.sql
- searches.sql
- first_file.sql
- flow.sql
- problems.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT *
48 FROM photo_tags
49 JOIN tags
50   ON photo_tags.tag_id = tags.id
51 GROUP BY tags.id;
52

```

SQL

Comm

- Logical Operators
- refining_queries
- relationships
- relationships.1
- relationships.2
- testing
- book_code.sql
- book_data.sql
- searches.sql
- first_file.sql
- flow.sql
- problems.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT
48   tags.tag_name,
49   COUNT(*)
50 FROM photo_tags
51 JOIN tags
52   ON photo_tags.tag_id = tags.id
53 GROUP BY tags.id;
54

```

SQL

Comm

- Logical Operators
- refining_queries
- relationships
- relationships.1
- relationships.2
- testing
- book_code.sql
- book_data.sql
- searches.sql
- first_file.sql
- flow.sql
- problems.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT
48   tags.tag_name,
49   COUNT(*) as total
50 FROM photo_tags
51 JOIN tags
52   ON photo_tags.tag_id = tags.id
53 GROUP BY tags.id;
54

```

SQL

Comm

- Logical Operators
- refining_queries
- relationships
- relationships.1
- relationships.2
- testing
- book_code.sql
- book_data.sql
- searches.sql
- first_file.sql
- flow.sql
- problems.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT
48   tags.tag_name,
49   COUNT(*) as total
50 FROM photo_tags
51 JOIN tags
52   ON photo_tags.tag_id = tags.id
53 GROUP BY tags.id
54 ORDER BY total;
55

```

SQL

Comm

- Logical Operators
- refining_queries
- relationships
- relationships.1
- relationships.2
- testing
- book_code.sql
- book_data.sql
- searches.sql
- first_file.sql
- flow.sql
- problems.sql

```

45 -- 6. Five Most popular hashtags
46
47 SELECT
48   tags.tag_name,
49   COUNT(*) as total
50 FROM photo_tags
51 JOIN tags
52   ON photo_tags.tag_id = tags.id
53 GROUP BY tags.id
54 ORDER BY total DESC
55 LIMIT 5;
56

```

SQL

Challenge 7

We have a small problem with bots on our site...

Find users who have liked every single photo on the site

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql
- first_file.sql

```

57 -- 7. Finding Bots - users who have liked every single photo
58
59 SELECT *
60 FROM users
61 INNER JOIN likes
62     ON users.id = likes.user_id;
63
0:42 | 99 | Alek_Watsica | 2016-12-10 07:43:58 | 99 | 160 | 2017-05-06 18:3
0:42 | 99 | Alek_Watsica | 2016-12-10 07:43:58 | 99 | 161 | 2017-05-06 18:3
0:42 | 99 | Alek_Watsica | 2016-12-10 07:43:58 | 99 | 175 | 2017-05-06 18:3
0:42 | 99 | Alek_Watsica | 2016-12-10 07:43:58 | 99 | 178 | 2017-05-06 18:3

```

Debugger

Commands

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql
- book_data.sql
- exercises.sql
- first_file.sql
- like.sql

```

57 -- 7. Finding Bots - users who have liked every single photo
58
59 SELECT *
60 FROM users
61 INNER JOIN likes
62     ON users.id = likes.user_id
63 GROUP BY likes.user_id;
64
0:44 | 99 | Alek_Watsica | 2016-12-10 07:43:58 | 99 | 3 | 2017-05-06 18:3
0:42 | 100 | Javonte83 | 2017-03-27 22:06:37 | 100 | 3 | 2017-05-06 18:3
0:42 |

```

77 rows in set (0.01 sec)

Debugger

Work

Commands

Instagram

- ig_clone.sql
- solutions.sql
- starter_data.sql

Logical Operators

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing

```

59 SELECT
60     username,
61     user_id
62 FROM users
63 INNER JOIN likes
64     ON users.id = likes.user_id
65 GROUP BY likes.user_id;
66
Neyla_Boyle | 55 |
Peter.Stehr0 | 56 |
Julien_Schmidt | 57 |
Sam52 | 60 |
Jayson65 | 61 |
Ressie_Stanton46 | 62 |
Elenor88 | 63 |
Adelle96 | 65 |
Mike.Auer39 | 66 |

```

Outline Debugger

Work

Commands

Instagram

- ig_clone.sql
- solutions.sql
- starter_data.sql

Logical Operators

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing
- book_code.sql

```

59 SELECT
60     username,
61     user_id,
62     COUNT(*) AS total
63 FROM users
64 INNER JOIN likes
65     ON users.id = likes.user_id
66 GROUP BY likes.user_id;
67
Leslie67 | 75 | 257 |
Janelle.Nikolaus81 | 76 | 257 |
Colten.Harris76 | 78 | 83 |
Katarina.Dibbert | 79 | 75 |
Aracely.Johnston98 | 82 | 84 |
Alysa22 | 84 | 75 |
Milford_Gleichner42 | 85 | 87 |
Rick29 | 87 | 92 |
Bethany20 | 91 | 257 |

```

Outline Debugger

Work

Commands

Instagram

- ig_clone.sql
- solutions.sql
- starter_data.sql

Logical Operators

- refining_selections
- Relationships
- Relationships.1
- Relationships.2
- testing

```

59 SELECT
60     username,
61     COUNT(*) AS total
62 FROM users
63 INNER JOIN likes
64     ON users.id = likes.user_id
65 GROUP BY likes.user_id;
66

```

Outline Debugger

```

Mike.Auer39 | 257 |
Emilio_Bernier52 | 86 |
Karley_Bosco | 97 |
Erick5 | 88 |
Nia_Haag | 257 |
Kathryn80 | 85 |
Jaylan.Lakin | 86 |
Leslie67 | 257 |
Janelle.Nikolaus81 | 257 |

```

Work
Commands
Navigate

Users (4) 1 results
Instagram
ig_clone.sql
solutions.sql
starter_data.sql
Logical Operators
refining_selections
Relationships
Relationships.1
Relationships.2
testing
book_code.sql

```
59 SELECT
60     username,
61     COUNT(*) AS num_likes
62 FROM users
63 INNER JOIN likes
64     ON users.id = likes.user_id
65 GROUP BY likes.user_id
66 WHERE num_likes = 257;
67
--> COUNT(*) AS num_likes
--> FROM users
--> INNER JOIN likes
-->     ON users.id = likes.user_id
--> GROUP BY likes.user_id
--> WHERE num_likes = 257;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that correspond
s to your MySQL server version for the right syntax to use near 'WHERE num_likes = 257' at
line 8
```

Home
Outline
Debugger

Work
Commands
Navigate

Users and Friends
Instagram
ig_clone.sql
solutions.sql
starter_data.sql
Logical Operators
refining_selections
Relationships
Relationships.1
Relationships.2
testing
book_code.sql
book_data.sql
exercises.sql

```
27 -- 7. Finding Bots - users who have liked every single photo
28
29 SELECT
30     username,
31     COUNT(*) AS num_likes
32 FROM users
33 INNER JOIN likes
34     ON users.id = likes.user_id
35 GROUP BY likes.user_id
36 HAVING num_likes = 257;
37
```

Outline
Debugger

username	num_likes
Aniya_Hackett	257
Jaclyn81	257
Rocio33	257
Maxwell.Halvorson	257
Ollie_Ledner37	257
Mckenna17	257

Workspaces

Commands

Navigate

- Dates and Times
- Instagram
 - ig_clone.sql
 - solutions.sql
 - starter_data.sql
- Logical Operators
 - refining_selections
- Relationships
 - Relationships.1
 - Relationships.2
- testing
 - book_code.sql
 - book_data.sql
 - exercises.sql
 - first file.sql

-- 7. Finding Bots - users who have liked every single photo

SELECT
 username,
 COUNT(*) AS num_likes
FROM users
INNER JOIN likes
 ON users.id = likes.user_id
GROUP BY likes.user_id
HAVING num_likes = (SELECT COUNT(*) FROM photos);

username	num_likes
Aniya_Hackett	257
Jaclyn81	257
Rocio33	257