

Learn SQL from Scratch Chris Zupancic 2/24/2019

The survey table has 3 columns:

- question
- user\_id
- response

The first four rows from the query are shown below

question	user_id	response
What are you looking for?	005e7f99-d48c-4fce-b605- 10506c85aaf7	Women's Styles
2. What's your fit?	005e7f99-d48c-4fce-b605- 10506c85aaf7	Medium
3. Which shapes do you like?	00a556ed-f13e-4c67-8704- 27e3573684cd	Round
4. Which colors do you like?	00a556ed-f13e-4c67-8704- 27e3573684cd	Two-Tone

Task 1 Query

SELECT \*
FROM survey
LIMIT 10;

Task - Create a quiz funnel using the group by command

The results are in the table below

question	count(distinct user_id)		
1. What are you looking for?	500		
2. What's your fit?	475		
3. Which shapes do you like?	380		
4. Which colors do you like?	361		
5. When was your last eye exam?	270		

Task 2 Query
select question, count(distinct user\_id)
from survey
group by question;

Below is the number of users who complete each question with the percentage of users completing each question in the final column.

- Question 3 and question 5 have the lowest completion rates
- A reason question 3 could have a lower completion rate could be users don't like any of the shapes offered and are no longer interested in the glasses
- A reason question 5 might have a low completion rate could be users do not know when they had their last eye exam or they haven't had an eye exam at all

question	count(distinct user_id)	% of users
1. What are you looking for?	500	100%
2. What's your fit?	475	95%
3. Which shapes do you like?	380	80%
4. Which colors do you like?	361	95%
5. When was your last eye exam?	270	75%

### These are the 3 tables resulting from the task 4 query below

```
Task 4 Query
select *
from quiz
limit 5;
select *
from home_try_on
limit 5;
select *
from purchase
limit 5;
```

	Ou	ery Results					
user_id	4.	style	fit		shape	col	or
_		men's Styles	Medium	Re	ctangular	Torto	oise
291f1cca-e507-48be-b063-002b1490646	8 Wo	men's Styles	Narrow		Round	Bla	ck
75122300-0736-4087-b6d8-c0c5373a1a0	)4 Wo	men's Styles	Wide	Re	ctangular	Two-	Tone
75bc6ebd-40cd-4e1d-a301-27ddd93b12e	2 Wo	men's Styles	Narrow		Square	3	
ce965c4d-7a2b-4db6-9847-601747fa781	2 Wo	men's Styles	Wide	Re	ctangular	Bla	ck
user_id		number_o	number_of_pairs address		SS		
d8addd87-3217-4429-9a01-d56d68111da7		5 pairs 145 New York 9a		rork 9a			
f52b07c8-abe4-4f4a-9d39-ba9fc9a184cc		5 pai	rs	383 Madison Ave			
8ba0d2d5-1a31-403e-9fa5-79540f8477f9		5 pairs 287 Pell St		ll St			
4e71850e-8bbf-4e6b-accc-49a7bb46c586		3 pairs 3		347 Madison	347 Madison Square N		
3bc8f97f-2336-4dab-bd86-e391609dab97		5 pairs 182 0		182 Corn	elia St		
user_id prod		style	model_n	del_name colo		r	price
00a9dd17-36c8-430c-9d76-df49d4197dcf	8	Women's Styles	Lucy	Lucy Jet		ick	150
00e15fe0-c86f-4818-9c63-3422211baa97	7	Women's Styles	Lucy	Lucy		Crystal	150
017506f7-aba1-4b9d-8b7b-f4426e71b8ca	4	Men's Styles	Dawe	Dawes		ick	150
0176bfb3-9c51-4b1c-b593-87edab3c54cb	10	Women's Styles Eugene Narrov		arrow	Rosewood	Tortoise	95
01fdf106-f73c-4d3f-a036-2f3e2ab1ce06	8	Women's Styles	Lucy	/	Jet Bla	ick	150

## Task 5 code is below and the resulting table is to the right

```
Task 5 Query
select distinct q.user id,
             h.user id is not
null as 'is home try on',
  h.number of pairs,
 p.user id is not null as
'is purchase'
from quiz as 'q'
left join home try on as 'h'
             on q.user id =
h.user id
left join purchase as 'p'
             on p.user id =
q.user id
limit 10;
```

user_id	is_home_try_ on	number_of_ pairs	is_purchase
4e8118dc-bb3d-49bf-85fc- cca8d83232ac	1	3 pairs	0
291f1cca-e507-48be-b063- 002b14906468	1	3 pairs	1
75122300-0736-4087-b6d8- c0c5373a1a04	0	Null	0
75bc6ebd-40cd-4e1d-a301- 27ddd93b12e2	1	5 pairs	0
ce965c4d-7a2b-4db6-9847- 601747fa7812	1	3 pairs	1
28867d12-27a6-4e6a-a5fb- 8bb5440117ae	1	5 pairs	1
5a7a7e13-fbcf-46e4-9093- 79799649d6c5	0	Null	0
0143cb8b-bb81-4916-9750- ce956c9f9bd9	0	Null	0
a4ccc1b3-cbb6-449c-b7a5- 03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb- f6d464104298	1	3 pairs	0

Task 6 code is below and the resulting table is to the right

```
Task 6 Query
with sales conversion as (select
distinct q.user id,
             h.user id is not
null as 'is home try on',
  h.number of pairs,
  p.user id is not null as
'is purchase'
from quiz as 'q'
left join home try on as 'h'
             on q.user id =
h.user id
left join purchase as 'p'
             on p.user id =
q.user id
select count(*) as 'browse',
             sum (is home try on)
as 'try on',
  sum(is purchase) as 'purchase'
  from sales conversion;
```

#### **Resulting Sales Conversion Table**

browse	try_on	purchase
1000	750	495

- This table groups the data from the usage table
- By grouping the data this way we are able to see the number of users as they move through the purchase process

Task 6 code is below and the resulting table is to the right

```
Task 6 Query
with sales conversion as (select
distinct q.user id,
             h.user id is not
null as 'is home try on',
  h.number of pairs,
  p.user id is not null as
'is purchase'
from quiz as 'q'
left join home try on as 'h'
             on q.user id =
h.user id
left join purchase as 'p'
             on p.user id =
q.user id
select count(*) as 'browse',
             sum(is home try on)
as 'try on',
  sum(is purchase) as 'purchase',
  1.0 * sum(is home try on) /
count (user id) as '%try on',
  1.0 * sum(is purchase) /
sum(is home try on) as '%Purch'
  from sales conversion;
```

#### **Resulting Sales Conversion Table with % Analysis**

browse	try_on	purchase	%try_on	%Purch
1000	750	495	0.75	0.66

- This table adds the percent conversion rates as customers move through the purchase process
- The results show of the 1000 customers who browse 750, or 75%, will try on glasses
- 495 customers will make a purchase, or 66% of the number of who try glasses on will end up buying a pair of glasses

Task 6.2 code is below and the resulting table is to the right

```
Task 6.2 Query
select *,
count(distinct user_id)
from survey
group by 3
order by 1 asc;
```

#### **Survey Analysis**

- The table that results from this code, shown on the next slide, allows the analyst to see the number of users who selected specific responses to each question in the survey
- The analyst is now able to plug this data into a spreadsheet and find a breakdown of responses as a percentage
- By looking at the survey responses this way the analyst can gain further insights into what the customers are shopping for, what the most popular designs, colors and shapes are, what the most common size is, etc.
- These insights can provide the company with meaningful information that can be used to influence how they manage inventory

# Usage Funnels with Warby Parker, Task 6.2 Table

question	user_id	response	count(distinct user_id)
1. What are you looking for?	ff04eafa-86a2-40b5-baf9-4348958c9dd8	I'm not sure. Let's skip it.	92
1. What are you looking for?	ff48cdf3-e09e-4fb3-a46b-3751c9764dc7	Men's Styles	242
1. What are you looking for?	ff8461f7-e500-458c-9087-98fa63562d99	Women's Styles	209
2. What's your fit?	ff29594b-a211-49c9-9364-7a579dddf031	Medium	132
2. What's your fit?	ff8461f7-e500-458c-9087-98fa63562d99	Narrow	208
2. What's your fit?	fbc2b1bf-7f06-4b9c-abd1-30e72be5d37f	Wide	88
3. Which shapes do you like?	ff48cdf3-e09e-4fb3-a46b-3751c9764dc7	No Preference	29
3. Which shapes do you like?	ff8461f7-e500-458c-9087-98fa63562d99	Rectangular	141
3. Which shapes do you like?	fdebd048-d177-4e75-ab48-7e0227c886f2	Round	91
3. Which shapes do you like?	faaedc63-30cf-4c1a-998e-2f4269a718aa	Square	119
4. Which colors do you like?	ff48cdf3-e09e-4fb3-a46b-3751c9764dc7	Black	112
4. Which colors do you like?	fa973108-5c1e-42e5-a7b4-338b9343855e	Crystal	69
4. Which colors do you like?	f8ec9613-8ad3-47a8-bfa3-c3e7e7372d67	Neutral	36
4. Which colors do you like?	ff8461f7-e500-458c-9087-98fa63562d99	Tortoise	117
4. Which colors do you like?	f49e0727-1475-405b-acee-2b388cfbf2ea	Two-Tone	27
5. When was your last eye exam?	fdebd048-d177-4e75-ab48-7e0227c886f2	1-3 Years	56
5. When was your last eye exam?	fc526449-a1bc-477e-bbf4-21c13bdc3105	3+ Years	37
5. When was your last eye exam?	ff48cdf3-e09e-4fb3-a46b-3751c9764dc7	<1 Year	141
5. When was your last eye exam?	f96d7b10-ccb8-4dbd-97a7-2bc510292554	Not Sure. Let's Skip It	36