codecademy

Funnels with Warby Parker Final Project

Learn SQL from Scratch

Megan Adam

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1.1 Quiz Funnel, task 1

Warby Parker created a 5-question survey to help users find their perfect frames. The responses to these questions were saved in the table, survey. My first task was to select all the columns in the table and limit the rows pulled to 10.

- This allows me to see the type of data stored.
- The columns include: user_id, style, fit, shape, color

Below is a visual of the query results.

```
-- Query Code

SELECT *
FROM survey
LIMIT 10;
```

Query Results

user_id	style	fit	shape	color
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	Women's Styles	Medium	Rectangular	Tortoise
291f1cca-e507-48be-b063-002b14906468	Women's Styles	Narrow	Round	Black
75122300-0736-4087-b6d8-c0c5373a1a04	Women's Styles	Wide	Rectangular	Two-Tone
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	Women's Styles	Narrow	Square	Two-Tone
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black
28867d12-27a6-4e6a-a5fb-8bb5440117ae	Women's Styles	Narrow	Rectangular	Black
5a7a7e13-fbcf-46e4-9093-79799649d6c5	Women's Styles	Wide	Rectangular	Tortoise
0143cb8b-bb81-4916-9750-ce956c9f9bd9	Women's Styles	Wide	Rectangular	Two-Tone
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	Women's Styles	I'm not sure. Let's skip it.	Square	Tortoise
b1dded76-cd60-4222-82cb-f6d464104298	Women's Styles	Narrow	Rectangular	Crystal

1.2 Quiz Funnel, task 2

Not everyone will finish the survey, however. My second task was to create a query that counts the number of responses for each question.

- Question 1: 500 responses
- Question 2: 475 responses
- Question 3: 380 responses
- Question 4: 361 responses
- Question 5: 270 responses

Below is a visual of the query results.

```
-- Query Code

SELECT question, COUNT (DISTINCT user_id) AS
       'responses'
FROM survey
GROUP BY question;
```

Query Results

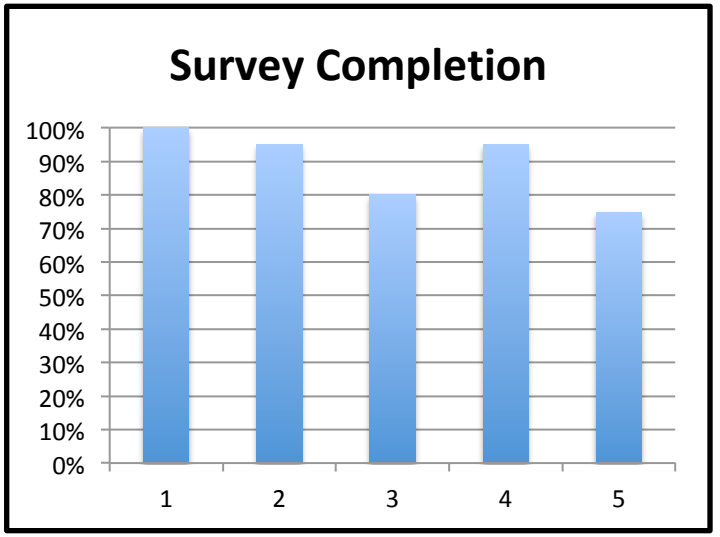
question	responses
1. What are you looking for?	500
2. What's your fit?	475
3. Which shapes do you like?	380
4. Which colors do you like?	361
5. When was your last eye exam?	270

1.3 Quiz Funnel, task 3

- Warby Parker wants to know the percentage of users who answer each question in the 5-question survey.
- My third task was to create an excel spreadsheet to calculate this percentage. I did this by dividing the number of answers of each question by the previous question's answer quantity
    - i.e. Question 3 had 380 responses and Question 2 had 475, so the percentage completed would be (380/475) = 80%

Question Number	Percentage Completed	Number
1	100%	500
2	95%	475
3	80%	380
4	95%	361
5	75%	270

The 5th question, "When was your last eye exam?" has the lowest completion rate. This rationally makes sense because, not only are there people who filter out naturally with each question, but, also, because not everyone knows the last time they completed an eye exam.



1.4 Quiz Funnel, task 4

Warby Parker has other databases besides survey. These tables include quiz, home_try_on, and purchase. My fourth task was to select all columns from each database to see what information each database tracks.

- The table, quiz, has columns including: user_id, style, fit, shape, color
- The table, home_try_on, has columns including: user_id, number_of_pairs, address
- The table, purchase has columns including: user_id, product_id, style, model_name, color

Below is a visual of the query results for each, respectively.

```
-- Query Code

SELECT *
FROM quiz
LIMIT 5;

SELECT *
FROM home_try_on
LIMIT 5;

SELECT *
FROM purchase
LIMIT 5;
```

Query Results

user_id	style	fit	shape	color
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	Women's Styles	Medium	Rectangular	Tortoise
291f1cca-e507-48be-b063-002b14906468	Women's Styles	Narrow	Round	Black
75122300-0736-4087-b6d8-c0c5373a1a04	Women's Styles	Wide	Rectangular	Two-Tone
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	Women's Styles	Narrow	Square	Two-Tone
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black

user_id	number_of_pairs	address
d8addd87-3217-4429-9a01-d56d68111da7	5 pairs	145 New York 9a
f52b07c8-abe4-4f4a-9d39-ba9fc9a184cc	5 pairs	383 Madison Ave
8ba0d2d5-1a31-403e-9fa5-79540f8477f9	5 pairs	287 Pell St
4e71850e-8bbf-4e6b-accc-49a7bb46c586	3 pairs	347 Madison Square N
3bc8f97f-2336-4dab-bd86-e391609dab97	5 pairs	182 Cornelia St

user_id	product_id	style	model_name	color	price
00a9dd17-36c8-430c-9d76-df49d4197dcf	8	Women's Styles	Lucy	Jet Black	150
00e15fe0-c86f-4818-9c63-3422211baa97	7	Women's Styles	Lucy	Elderflower Crystal	150
017506f7-aba1-4b9d-8b7b-f4426e71b8ca	4	Men's Styles	Dawes	Jet Black	150
0176bfb3-9c51-4b1c-b593-87edab3c54cb	10	Women's Styles	Eugene Narrow	Rosewood Tortoise	95
01fdf106-f73c-4d3f-a036-2f3e2ab1ce06	8	Women's Styles	Lucy	Jet Black	150

1.5 Quiz Funnel, task 5

Warby Parker wants to know the relation between each of the different tables. My fifth task is to combine the three tunnels, beginning with browsing and ending with purchasing.

- This allows me to see how many people browsed the site and moved forward to home try on's. Then, of those who tried some on, either 3 or 5 pairs, which ones of them made a final purchase.

Below is a visual of the query results.

```
-- Query Code

SELECT DISTINCT quiz.user_id,
     CASE WHEN home_try_on.user_id IS NULL THEN 'False' ELSE
'True' END AS 'is_home_try_on',
     home_try_on.number_of_pairs,
     CASE WHEN purchase.user_id IS NULL THEN 'False' ELSE
'True' END AS 'is_purchase'
FROM quiz
LEFT JOIN home_try_on
ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
ON quiz.user_id = purchase.user_id
LIMIT 10;
```

Query Results

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

1.6 Quiz Funnel, task 6

After this assignment, Warby Parker can have a better understanding about their users and can see areas where they are thriving and areas where they could make improvements. I have listed a few things that I noticed below.

- Of the people who do home try on's, 379 choose 3 pairs and 371 choose 5 pairs. [Table 1]
- More women's style glasses (469) are browsed for than men's styles (432). [Table 2]
- Most popular type of glasses purchased are Eugene Narrow (116 at $95), followed by Dawes (107 at $95), Brady (95 at $95), Lucy (86 at $150), Olive (50 at $95), and Monocle (41 at $50). [Table 3]

Query Results	
number_of_pairs	**number preference**
3 pairs	379
5 pairs	371

Query Results	
style	**browsing preference**
I'm not sure. Let's skip it.	99
Men's Styles	432
Women's Styles	469

Query Results	
model_name	**model preference**
Brady	95
Dawes	107
Eugene Narrow	116
Lucy	86
Monocle	41
Olive	50

A few things that Warby Parker can take away from these insights would be:

- Put more money into men's focused advertisement in order to bring more men onto their site
- Have discounts on their less popular glasses to encourage sales or to keep less of them in stock in to reduce production costs.