



WARBY PARKER
eyewear

Codecademy Capstone Project 6/5/2018 Intensive SQL Course

By: Monette Sommers

Task 1 - Survey Table

Question: What columns does the table have?

SQL Query:

Answer:

- question
- user_id
- responses

```
SELECT *  
FROM survey  
LIMIT 10;
```

Query Results		
question	user_id	response
1. 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
1. What are you looking for?	00a556ed-f13e-4c67-8704-27e3573684cd	I'm not sure. Let's skip it.
2. What's your fit?	00a556ed-f13e-4c67-8704-27e3573684cd	Narrow
5. When was your last eye exam?	00a556ed-f13e-4c67-8704-27e3573684cd	<1 Year
3. Which shapes do you like?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Square
5. When was your last eye exam?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	<1 Year
2. What's your fit?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Medium

Task 2 - Survey Table

Question: What is the number of responses for each question?

Answer:

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

SQL Query:

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

Task 3 - Survey Table

Questions:

1. Which question(s) of the quiz have a lower completion rates?
2. What do you think is the reason?

Answer:

1. Q5 - When was your last eye exam?
2. Respondents may not remember the date of their last eye exam.

Table:

Question	Responses	Percent
1. What are you looking for?	500	25.2%
2. What's your fit?	475	23.9%
3. Which shapes do you like?	380	19.1%
4. Which colors do you like?	361	18.2%
5. When was your last eye exam?	270	13.6%
Total # of Responses	1,986	

Task 4 - Quiz, Home Try On, and Purchase Tables

Question: Examine the first five rows of each table. What are the column names?

Answer:

quiz table

- user_id
- style
- fit
- shape
- color

purchase table

- user_id
- product_id
- style
- model_name
- Color
- price

home_try_on table

- user_id
- number_of_pairs
- address

SQL Query:

```
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	
d8add87-3217-4429-9a01-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-acc-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

Task 5 - Quiz, Home Try On, and Purchase Tables

SQL Query:

```
WITH home_try_on_cte AS
(
  SELECT user_id,
         CASE
           WHEN user_id IS NOT NULL THEN 'True'
           ELSE 'False'
         END AS is_home_try_on
  FROM home_try_on
  GROUP BY user_id
),

purchase_cte AS
(
  SELECT user_id,
         CASE
           WHEN user_id IS NOT NULL THEN 'True'
           ELSE 'False'
         END AS is_purchase
  FROM purchase
  GROUP BY user_id
)

SELECT hto_cte.user_id,
       hto_cte.is_home_try_on,
       hto.number_of_pairs,
       p_cte.is_purchase
FROM home_try_on_cte hto_cte
LEFT JOIN home_try_on hto
ON hto_cte.user_id = hto.user_id
LEFT JOIN purchase_cte p_cte
ON hto.user_id = p_cte.user_id
LIMIT 10;
```

Query Results:

Query Results			
user_id	is_home_try_on	number_of_pairs	is_purchase
00a9dd17-36c8-430c-9d76-df49d4197dcf	True	5 pairs	True
00e15fe0-c86f-4818-9c63-3422211baa97	True	3 pairs	True
017506f7-aba1-4b9d-8b7b-f4426e71b8ca	True	3 pairs	True
0176bfb3-9c51-4b1c-b593-87edab3c54cb	True	3 pairs	True
01fdf106-f73c-4d3f-a036-2f3e2ab1ce06	True	3 pairs	True
021901a5-74ee-482d-9f03-0089d17ff7d6	True	5 pairs	True
0261a9b6-4ee5-4347-b1ab-6216ba57075f	True	5 pairs	∅
026e11d9-926c-4206-af7c-273e3ee6ad7f	True	3 pairs	True
028b47b0-e075-4b2c-bcf3-f963d8089449	True	3 pairs	True
028f7d56-0def-4556-8c05-4c9ec6bd3c20	True	5 pairs	∅

Task 6 - Quiz, Home Try On, and Purchase Tables

SQL Queries:

```
SELECT purchase.model_name AS 'Model',
       purchase.style AS 'Style',
       COUNT(purchase.model_name) AS 'Pairs Purchased',
       purchase.price AS 'Price',
       (COUNT(purchase.model_name)*purchase.price) AS 'Revenue'
FROM purchase
GROUP BY 1
ORDER BY 4 DESC;

SELECT purchase.style AS 'Style',
       COUNT(purchase.style) AS 'Models Purchased',
       (COUNT(purchase.style)*purchase.price) AS 'Revenue'
FROM purchase
GROUP BY 1
ORDER BY 3;

SELECT home_try_on.number_of_pairs AS 'Pairs Tried',
       COUNT(DISTINCT home_try_on.user_id) AS 'Trial Customers Count',
       COUNT(DISTINCT purchase.user_id) AS 'Paid Customers Count',
       ROUND(1.0*COUNT(DISTINCT purchase.user_id)/COUNT(DISTINCT home_try_on.user_id), 2) AS 'Conversion Rate'
FROM home_try_on
LEFT JOIN purchase
ON home_try_on.user_id = purchase.user_id
GROUP BY 1;
```

Task 6 - Quiz, Home Try On, and Purchase Tables

Tables:

Query Results				
Model	Style	Pairs Purchased	Price	Revenue
Dawes	Men's Styles	107	150	16050
Lucy	Women's Styles	86	150	12900
Brady	Men's Styles	95	95	9025
Eugene Narrow	Women's Styles	116	95	11020
Olive	Women's Styles	50	95	4750
Monocle	Men's Styles	41	50	2050
Style		Models Purchased	Revenue	
Men's Styles		243	23085	
Women's Styles		252	23940	
Pairs Tried	Trial Customers Count	Paid Customers Count	Conversion Rate	
3 pairs	379	201	0.53	
5 pairs	371	294	0.79	

Task 6 - Quiz, Home Try On, and Purchase Tables

Tables with Additional Calculations:

Model	Style	Pairs Purchased	% Purchased	Price	Revenue	% of Revenue
Dawes	Men's Styles	107	22%	150	\$ 16,050	29%
Lucy	Women's Styles	86	17%	150	\$ 12,900	23%
Brady	Men's Styles	95	19%	95	\$ 9,025	16%
Eugene Narrow	Women's Styles	116	23%	95	\$ 11,020	20%
Olive	Women's Styles	50	10%	95	\$ 4,750	9%
Monocle	Men's Styles	41	8%	50	\$ 2,050	4%
Totals		495			\$ 55,795	

Style	Models Purchased	% Purchased	Revenue	% of Revenue
Men's Styles	243	49%	\$23,085	49%
Women's Styles	252	51%	\$23,940	51%
Totals	495		\$47,025	
Differences	9	2%	\$855	2%
Notes on Differences	^ 9 more Women's style glasses were purchased	^ Women's style glasses earned were purchased 2% more than men's style glasses	^ Women's style glasses earned \$855 more in revenue	^ Women's style glasses earned 2% more revenue

Task 6 - Quiz, Home Try On, and Purchase Tables

Tables with Additional Calculations (cont'd):

Pairs Tried	Trial Customers Count	Paid Customers Count	Conversion Rate
3 pairs	379	201	0.53
5 pairs	371	294	0.79
Totals	750	495	0.66
Differences	-8	93	0.26
Notes on Differences	^ 8 fewer customers who trialed 5 pairs	^ There were 93 more customers who trialed 5 pairs ended up making a purchase	^ Compared with customers who trialed 3 pairs, customers who trialed 5 pairs are 26% more likely to make a purchase

Question: What are some actionable insights for Warby Parker?

Answer:

- A total of **495 pairs** were sold, earning total **revenue of \$55,795**
- Highest Revenue Generating Model: **Dawes (Men's Style)**, earning revenue of **\$16,050**
- Most Purchased Model: **Eugene Narrow (Women's Style)**, selling **116 pairs**
- By only a **2% margin**, more women's styles were sold than men's styles--a difference of 9 pairs or \$855
- Customers who tried 5 pairs are **26% more likely to purchase** than customers who tried 3 pairs



Thank You

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