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Capstone: Funnels with Warby Parker

Learn SQL from Scratch

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Question 1

Q. Select all columns from the first 10 rows. What columns does the table have?

A. The table survey has 3 columns: question, user_id, response.

Question	User_id	Response

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

Question 2

Q. What is the number of responses for each question?

A.

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

Question	COUNT (DISTINCT user_id)	

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

Question 3

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

A. The question 3 and 5 have lower completion rates, 80%, and 75% respectively. This suggests that people have some difficulty to define which shape they prefer and to remind their last eye exam.

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

Question	COUNT (DISTINCT user_id)	% answered
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%

Question 4

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

A.

- Quiz: user_id, style, fit, shape, color.
- Home_try_on: user_id, number_of_pairs, address.
- Purchase: user_id, product_id, style, model_name, color, price.


```
SELECT *
FROM quiz
LIMIT 5;

SELECT *
FROM home_try_on
LIMIT 5;

SELECT *
FROM purchase
LIMIT 5;
```

Question 5

Q. Use a LEFT JOIN to combine the three tables, starting with the top of the funnel (browse) and ending with the bottom of the funnel (purchase). Select only the first 10 rows from this table.

A. With this format, we can analyze the funnel from quiz to purchase. Next question, some analysis will be explained.

```
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 h.user_id = q.user_id
LEFT JOIN purchase AS 'p'
ON p.user_id = h.user_id
LIMIT 10;
```


Question 6.

Q. We can compare conversion from quiz→home_try_on and home_try_on→purchase.

A. Analyzing the data, the conversion from quiz to home_try_on is 75% and from home_try_on to purchase is 66%.


```
WITH funnel 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 h.user_id = q.user_id
LEFT JOIN purchase AS 'p'
ON p.user_id = h.user_id)

SELECT COUNT (*) AS 'num_quiz’,
SUM (is_home_try_on) AS 'num_home_try_on’,
UM (is_purchase) AS 'num_purchase’,
1.0 * SUM (is_home_try_on) / COUNT (user_id) AS
'quiz_to_home_try_on’,
1.0 * SUM (is_purchase) / SUM (is_home_try_on) AS
'home_try_on_to_purchase'
FROM funnel;
```

Question 6.

Q. We can calculate the difference in purchase rates between customers who had 3 number_of_pairs with ones who had 5.

A. The purchase rate (home_try_on to purchase) from people who had 3 pairs is 53,03%, while those who had 5 pairs the rate was 79,24%. After this analysis, Warby Parker must use 5 pairs for home try on.


```
WITH funnel 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 h.user_id = q.user_id
LEFT JOIN purchase AS 'p'
ON p.user_id = h.user_id)

SELECT number_of_pairs, COUNT (*) AS 'num_quiz', SUM
(is_home_try_on) AS 'num_home_try_on', SUM
(is_purchase) AS 'num_purchase', 1.0 * SUM
(is_home_try_on) / COUNT (user_id) AS
'quiz_to_home_try_on', 1.0 * SUM (is_purchase) / SUM
(is_home_try_on) AS 'home_try_on_to_purchase'
FROM funnel
WHERE number_of_pairs IS NOT NULL
GROUP BY 1
ORDER BY 1;
```

Question 6.

Q. The most common results of the style quiz.

A.

- I'm not sure. Let's skip it: 99
- Men's Styles: 432
- Women's Styles: 469


```
SELECT style, COUNT(*)
FROM quiz
GROUP BY 1;
```

Question 6.

Q. The most common types of purchase made..

A. TOP 5 product_id:

1. Product_id 3 has 63 purchases
2. Product_id 10 has 62 purchases
3. Product_id 9 has 54 purchases
4. Product_id 1 has 52 purchases
5. Product_id 6 has 50 purchases


```
SELECT product_id, COUNT(*)
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;
```

Question 6.

Q. What are some actionable insights for Warby Parker?

A. Warby Parker shoud have the option of 5 pairs solely and also facilitate its users with the kind of shapes they like the most during de quiz. Additionally, many user might not be able to tell when was their last eye exam, is a nice opportunity to offer this service at one their physical store or with any partnertship.
