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# Funnels Capstone – Warby Parkers

Learn SQL from Scratch
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# 1. Getting Familiar with Warby Parker

# 1.1 Survey Data Preview

In order to get a sense of the survey data, all columns for the first 10 rows were selected.
- The columns in the survey table were question, user id, and response.
- The results of the first 4 rows are shown below.

```
Query to view first 10 rows of the survey table:

select *
from survey
limit 10;
```

| 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 |

# 2. The Warby Parker Quiz Funnel

# 2.1 Quiz Funnel - Distinct Users Answering Each Question

To understand how users were progressing through each stage of the survey we queried the data to find the number of distinct users answering each sequential question. Our findings show:
- Our sample initially had 500 respondents who answered question one.
- With each sequential survey question, some respondents did not complete the funnel.
- The final question (question #5) had slightly more than half of the original responders (n= 270).
- Questions # 3 and 5 had greater numbers of attrition (82 and 74%, respectively – perhaps suggesting that these are more sensitive questions.

```
Query to obtain the distinct number of users answering
each question:

select question,
count (distinct user_id)
from survey
group by 1;
```

| Question | Count | Percent Completed (Percent change from previous question) |
|---|---|---|
| 1. What are you looking for? | 500 | 100% |
| 2. What's your fit? | 475 | 95% |
| 3. Which shapes do you like? | 380 | 82% |
| 4. Which colors do you like? | 361 | 95% |
| 5. When was your last eye exam? | 270 | 74% |

# 3. A/B Testing with Home Try-on Funnel

# 3.1 A/B Testing Description

● The Warby Parker's Purchase Funnel is: Take the Style Quiz → Home Try-On → Purchase the Perfect Pair of Glasses

● To evaluate whether the number of glasses available to try on at home an impact on the number of pairs purchased, A/B Testing was conducted with half of users receiving 3 pairs to try on and half receiving 5 pairs.

```
Query to join the quiz, number of pairs, and home try
on tables:

SELECT DISTINCT quiz.user_id,
   home_try_on.user_id IS NOT NULL AS
'is_home_try_on',
  home_try_on.number_of_pairs,
   purchase.user_id IS NOT NULL AS 'is_purchase'
FROM quiz
LEFT JOIN home_try_on
   ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
   ON purchase.user_id = quiz.user_id
LIMIT 10;
```

# 3.2 A/B Testing Results

The results of the A/B testing reveal that:

- Of the 1000 customers that made a purchase:
  - 379 received 3 pairs for at home try-on
  - 371 received 5 pairs for at home try-on
  - 250 did not try on any pairs at home

Query to join the quiz, number of pairs, and home try on tables:

```sql
SELECT DISTINCT quiz.user_id,
    home_try_on.user_id IS NOT NULL AS 'is_home_try_on',
    home_try_on.number_of_pairs,
    purchase.user_id IS NOT NULL AS 'is_purchase'
FROM quiz
LEFT JOIN home_try_on
    ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
    ON purchase.user_id = quiz.user_id
LIMIT 10;

WITH funnels AS
(SELECT DISTINCT quiz.user_id,
    home_try_on.user_id IS NOT NULL AS 'is_home_try_on',
    home_try_on.number_of_pairs,
    purchase.user_id IS NOT NULL AS 'is_purchase'
FROM quiz
LEFT JOIN home_try_on
    ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase )

SELECT COUNT(*) AS 'num_purchase', number_of_pairs,
sum(is_home_try_on) as 'try'
from funnels
group by 2;
```

# 4. Additional Warby Parker Findings

# 4.1 Additional Findings – Survey Results

Some additional findings from the Warby Parker analysis include:
- Women's styles were the most common styles customers were searching for (469 women's and 432 men's)
- Narrow was the most common fit (408), followed by medium (305).
- Rectangular was the most common shape (397), followed by square (326).
- Tortoise was the most common color (292), followed by black (280), and crystal (210).

# 4.2 Additional Findings – Purchases

A table with Warby Parker's customer purchases is shown below.  Based on the results we see that Dawes in Driftwood Fade color was the most popular purchase.  This product was sold at a price of $150.00.

| Number of Purchases | Product ID | Model | Color | Price ($) |
|---|---|---|---|---|
| 63 | 3 | Dawes | Driftwood Fade | 150 |
| 62 | 10 | Eugene Narrow | Rosewood Tortoise | 95 |
| 54 | 9 | Eugene Narrow | Rose Crystal | 95 |
| 52 | 1 | Brady | Layered Tortoise Matte | 95 |
| 50 | 6 | Olive | Pearled Tortoise | 95 |
| 44 | 4 | Dawes | Jet Black | 150 |
| 44 | 7 | Lucy | Elderflower Crystal | 150 |
| 43 | 2 | Brady | Sea Glass Gray | 95 |
| 42 | 8 | Lucy | Jet Black | 150 |
| 41 | 5 | Monocle | Endangered Tortoise | 50 |