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Usage Funnels Capstone Project
Learn SQL from Scratch
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December 28, 2018

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1. Quiz Funnel

1.1 Warby Parker Style Quiz

Warby Parker utilizes a Style Quiz which is made up of five questions:
- What are you looking for?
- What's your fit?
- Which shapes do you like?
- Which colors do you like?
- When was your last eye exam?

The table named 'Survey' contains the information from this quiz, including responses in 3 columns, structured as seen below.

question	user_id	response

1.2 Survey Table

To the right is the query I wrote to select the first 10 rows of the 'survey' table. The results of this query are below.

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

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

1.3 Quiz Completion Rates

- We have data from 500 individuals who started the quiz.
- 270 finished all 5 questions
- To the right, one can see how many people finished each question and what % of people completed each one.
- As you can see, completion dropped significantly on the last question. This is likely due the fact that most people don't know off-hand when their last eye exam was and are reluctant to spend time to look for the information to complete a simple quiz.
- Below is the query used to obtain the information in columns 1 and 2.

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

Question	User Count	% Users Answered
What are you looking for?	500	100%
What's your fit?	475	95%
Which shapes do you like?	380	76%
Which colors do you like?	361	72%
When was your last eye exam?	270	54%

2. Home Try-On Funnel

2.1 Warby Parker Style Quiz

Warby Parker's purchase funnel is composed of 3 steps:
- Take a style quiz
- Home Try-On (Customers receive either 3 or 5 pairs of glasses to try on)
- Purchase Glasses

There are 3 tables containing data from each of these three steps.
Below is a sample of the data resulting from a query that combines elements from each table into an additional table.

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		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		0
0143cb8b-bb81-4916-9750-ce956c9f9bd9	0		0
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb-f6d464104298	1	3 pairs	0

2.2 Survey Table

To the right is the query I wrote to produce the table on the previous page.
From this 4th table, I wrote a query that provides the number of customers who took part in each of the 3 stages of the purchase process.
The query is to the right and the results are below

Num_quiz	Num_try	Num_purchase
1000	750	495

75% of those who took the quiz took part in a home try-on
Just under 50% of those who took the quiz went on to purchase glasses

```
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 q
 left join home_try_on h
          on q.user_id = h.user_id
 left join purchase p
          on p.user_id = q.user_id
 limit 10;


with funnels 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 q
 left join home_try_on h
          on q.user_id = h.user_id
 left join purchase p
          on p.user_id = q.user_id)
  select count(*) as 'num_quiz', sum(is_home_try_on)
as 'num_try', sum(is_purchase) as 'num_purchase'
  from funnels;
```

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 from quiz q
 left join home_try_on h
          on q.user_id = h.user_id
 left join purchase p
          on p.user_id = q.user_id)
  select count(*) as 'num_quiz', sum(is_home_try_on)
as 'num_try', sum(is_purchase) as 'num_purchase'
  from funnels;
```

3. Funnel Findings

3.1 Survey Table

To the right are three additional queries that provide further insight into the purchasing process of Warby Parker's clientele.

The first of these produces the table below demonstrating that customers who received 5 pairs to try on, rather than 3 pairs were approximately 30% more likely to make a purchase

Num_of_pairs	Sum(is_purchase)
3	201
5	294

The next two queries explore whether men's styles or women's styles produce greater number of sales or a greater average price per sale.

The results show little variance in either number of sales or average sale price between men's and women's styles. The results are below.

Sales	Style
243	Men's Styles
252	Women's Styles

Style	Avg(price)
Men's Styles	111.625514403292
Women's Styles	113.769841269841

```
with funnels 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 q
 left join home_try_on h
          on q.user_id = h.user_id
 left join purchase p
          on p.user_id = q.user_id)
  select number_of_pairs, sum(is_purchase)
  from funnels
  group by number_of_pairs;


  select count(*) as gender, style
  from purchase
  group by style;


  select style, avg(price)
  from purchase
  group by style;
```