

# Codecademy

Learn SQL from scratch

CoolTShirts Final Capstone

---

Bill Neeb 7/18/2018

# Project Outline

## 1. Get familiar with the company.

- How many campaigns and sources does CoolTShirts use and how are they related? Be sure to explain the difference between `utm_campaign` and `utm_source`.
- What pages are on their website?

## 2. What is the user journey?

- How many first touches is each campaign responsible for?
- How many last touches is each campaign responsible for?
- How many visitors make a purchase?
- How many last touches *on the purchase page* is each campaign responsible for?
- What is the typical user journey?

## 3. Optimize the campaign budget

- CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

How many campaigns and sources does CoolTShirts use? Which source is used for each campaign?

Use three queries:

- one for the number of distinct campaigns,
- one for the number of distinct sources,
- one to find how they are related.

```
select count(distinct utm_campaign) as 'Campaign Count'
from page_visits;
```

### Campaign Count

8

```
select count(distinct utm_source) as 'Source Count'
from page_visits;
```

### Source Count

6

```
select distinct utm_campaign as Campaigns,
utm_source as Sources
from page_visits;
```

Campaigns	Sources
getting-to-know-cool-tshirts	nytimes
weekly-newsletter	email
ten-crazy-cool-tshirts-facts	buzzfeed
retargetting-campaign	email
retargetting-ad	facebook
interview-with-cool-tshirts-founder	medium
paid-search	google
cool-tshirts-search	google

What pages are on the CoolTShirts website?  
Find the distinct values of the page\_name column.

```
select distinct page_name as 'Page Names'  
from page_visits;
```

Page Names
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase



## What is the user journey?

How many first touches is each campaign responsible for?

You'll need to use the first-touch query from the lesson (also provided in the hint below). Group by campaign and count the number of first touches for each.

```
with first_touch as (select user_id, min(timestamp) as first_touch_at
from page_visits
group by user_id),

ft_attr as (select ft.user_id, ft.first_touch_at, pv.utm_source,
pv.utm_campaign
from first_touch ft

join page_visits pv
on ft.user_id = pv.user_id
and ft.first_touch_at = pv.timestamp)

select ft_attr.utm_source as Source, ft_attr.utm_campaign as Campaign,
count(*)
from ft_attr
group by 1, 2
order by 3 desc;
```

Source	Campaign	count(*)
medium	interview-with-cool-tshirts-founder	622
nytimes	getting-to-know-cool-tshirts	612
buzzfeed	ten-crazy-cool-tshirts-facts	576
google	cool-tshirts-search	169

How many last touches is each campaign responsible for?

Starting with the last-touch query from the lesson, group by campaign and count the number of last touches for each.

```
with last_touch as (select user_id, max(timestamp) as last_touch_at
from page_visits
group by user_id),

lt_attr as (select lt.user_id, lt.last_touch_at, pv.utm_source,
pv.utm_campaign
from last_touch lt

join page_visits pv
on lt.user_id = pv.user_id
and lt.last_touch_at = pv.timestamp)

select lt_attr.utm_source as Source, lt_attr.utm_campaign as Campaign,
count(*)
from lt_attr
group by 1, 2
order by 3 desc;
```

Source	Campaign	count(*)
email	weekly-newsletter	447
facebook	retargetting-ad	443
email	retargetting-campaign	245
nytimes	getting-to-know-cool-tshirts	232
buzzfeed	ten-crazy-cool-tshirts-facts	190
medium	interview-with-cool-tshirts-founder	184
google	paid-search	178
google	cool-tshirts-search	60

How many visitors make a purchase?

Count the distinct users who visited the page named 4 - purchase.

```
select count(distinct user_id) as 'Customers with Purchase'
from page_visits
where page_name = '4 - purchase';
```

Customers with Purchase

361

How many last touches *on the purchase page* is each campaign responsible for?

```
with last_touch as (select user_id, max(timestamp) as last_touch_at
from page_visits
where page_name = '4 - purchase'
group by user_id),

lt_attr as (select lt.user_id, lt.last_touch_at, pv.utm_source,
pv.utm_campaign
from last_touch lt
join page_visits pv
on lt.user_id = pv.user_id
and lt.last_touch_at = pv.timestamp)

select lt_attr.utm_source as Source, lt_attr.utm_campaign as Campaign,
count(*)
from lt_attr
group by 1, 2
order by 3 desc;
```

Source	Campaign	count(*)
email	weekly-newsletter	115
facebook	retargetting-ad	113
email	retargetting-campaign	54
google	paid-search	52
buzzfeed	ten-crazy-cool-tshirts-facts	9
nytimes	getting-to-know-cool-tshirts	9
medium	interview-with-cool-tshirts-founder	7
google	cool-tshirts-search	2

**Optimize the campaign budget**

CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

Campaign	First Touches	Last Touches	Purchases
interview-with-cool-tshirts-founder	622	184	7
getting-to-know-cool-tshirts	612	232	9
ten-crazy-cool-tshirts-facts	576	190	9
cool-tshirts-search	169	60	2
weekly-newsletter	0	447	115
retargeting-ad	0	443	113
retargeting-campaign	0	245	54
paid-search	0	178	52

CoolTShirts should re-invest in the highlighted campaigns. This would allow them to initially get the most users onto their site and allow them to follow up with their most effective closing campaigns that lead to the highest percentages of purchases.