



# Attribute Queries

Learn SQL from Scratch

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# **1. Getting Familiar with CoolTShirts**

## 1.1 Get Familiar with the Company

The three Queries to the right result in the below tables

- Query 1 shows the total campaigns run by CoolTShirts
- Query 2 shows the total sources run by CoolTShirts
- Query 3 shows which campaign is related to which source. As shown a source (Where the ad is found) can run more than one Campaign (The ad).

1.

Total Campaigns
8

2.

Total Sources
6

3.

Campaign	Source
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

```
Select Count(Distinct utm_campaign) AS 'Total Campaigns'
From page_visits;
```

```
Select Count(Distinct utm_source) AS 'Total Sources'
From page_visits;
```

```
Select Distinct utm_campaign AS 'Campaign', utm_source
AS 'Source'
From page_visits;
```

## 1.2 Get Familiar with the Company

The Query to the right results in the each page the customer can visit from each campaign. The goal of CoolTShirts is to get each customer to the purchase page and find out which source / campaign is most successful in doing so. The table below shows each distinct page resulting from the query.

Pages
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
Select Distinct page_name AS 'Pages'  
From page_visits;
```

## **2. Typical User Journey**

## 2.1 What is the User Journey

How many first touches is each campaign responsible for?

The Query to the right shows how many times each campaign receives the first touch or is the first time someone clicks on the campaign which can help CoolTShirts track which source / campaign brings the customer to the sight.

Results for this query are shown on the next slide.

```
WITH first_touch AS (  
  SELECT user_id,  
         MIN(timestamp) as first_touch_at  
  FROM page_visits  
  GROUP BY user_id)  
SELECT ft.user_id AS 'User ID',  
       ft.first_touch_at AS 'First Touch',  
       pv.utm_source AS 'Source',  
       pv.utm_campaign AS 'Campaign',  
       COUNT(utm_campaign) AS 'Total First Touches'  
FROM first_touch ft  
JOIN page_visits pv  
  ON ft.user_id = pv.user_id  
  AND ft.first_touch_at = pv.timestamp  
  
GROUP BY 4;
```

## 2.1 Results

User ID	First Touch	Source	Campaign	Total First Touches
99684	2018-01-13 13:20:49	google	cool-tshirts- search	169
99933	2018-01-25 00:04:39	nytimes	getting-to-know- cool-tshirts	612
99990	2018-01-13 23:30:09	medium	interview-with- cool-tshirts- founder	622
99765	2018-01-04 05:59:46	buzzfeed	ten-crazy-cool- tshirts-facts	576



## 2.2 What is the User Journey

How many last touches is each campaign responsible for?

The Query to the right shows how many times each campaign receives the Last touch or is the last time someone clicks on the campaign which can help CoolTShirts track which source / campaign customers have used most recently or are drawn back with. The goal is to find the last touch with a purchase to show which campaign / sources are most successful which will be shown later.

Results for this query are shown on the next slide.

```
WITH last_touch AS (  
    SELECT user_id ,  
           MAX(timestamp) as last_touch_at  
    FROM page_visits  
    GROUP BY user_id)  
SELECT lt.user_id AS 'User ID',  
       lt.last_touch_at AS 'Last Touch',  
       pv.utm_source AS 'Source',  
       pv.utm_campaign AS 'Campaign',  
       COUNT(utm_campaign) AS Total Last Touch'  
FROM last_touch lt  
JOIN page_visits pv  
    ON lt.user_id = pv.user_id  
    AND lt.last_touch_at = pv.timestamp  
  
GROUP BY 4;
```

## 2.2 Results

User ID	Last Touch	Source	Campaign	Total Last Touch
99344	2018-01-18 21:36:32	google	cool-tshirts-search	60
99589	2018-01-15 04:55:43	nytimes	getting-to-know-cool-tshirts	232
99838	2018-01-02 07:40:34	medium	interview-with-cool-tshirts-founder	184
98840	2018-01-10 04:58:48	google	paid-search	178
99928	2018-01-24 05:26:09	facebook	retargetting-ad	443
99990	2018-01-16 11:35:09	email	retargetting-campaign	245
99765	2018-01-04 05:59:47	buzzfeed	ten-crazy-cool-tshirts-facts	190
99933	2018-01-26 06:18:39	email	weekly-newsletter	447

## 2.3 What is the User Journey

How many visitors make a purchase?

The query to the right counts each unique user ID that has made a purchase using the criteria in which page\_name = '4 - purchase'

The results are shown below:

Total Users That Purchased
361

```
SELECT Count(Distinct user_id) AS 'Total Users That Purchased'  
From page_visits  
Where page_name = '4 - purchase';
```

## 2.4 What is the User Journey

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

The query on the right is similar to the query in 2.3 but with an added where clause. This clause adds the criteria that page\_visits = '4 - purchase'. In adding this the results now show the Campaigns with the last touch and also resulting in a purchase from the customer. This, as stated before, is very helpful for CoolTShirts in determining the most successful campaigns.

Results for this query are shown on the next slide.

```
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)  
SELECT lt.user_id AS 'User ID',  
       lt.last_touch_at AS 'Last Touch' ,  
       pv.utm_source AS 'Source',  
       pv.utm_campaign AS 'Campaign',  
       COUNT(utm_campaign) AS 'LT and Purchase'  
FROM last_touch lt  
  
JOIN page_visits pv  
    ON lt.user_id = pv.user_id  
    AND lt.last_touch_at = pv.timestamp  
  
GROUP BY 4;
```

## 2.4 Results

User ID	Last Touch	Source	Campaign	LT and Purchase
95650	2018-01-18 00:25:00	google	cool-tshirts-search	2
92172	2018-01-16 15:15:29	nytimes	getting-to-know-cool-tshirts	9
83547	2018-01-10 18:20:21	medium	interview-with-cool-tshirts-founder	7
94567	2018-01-19 16:37:58	google	paid-search	52
99897	2018-01-06 09:41:19	facebook	retargeting-ad	113
99285	2018-01-24 09:00:58	email	retargeting-campaign	54
98651	2018-01-15 04:17:36	buzzfeed	ten-crazy-cool-tshirts-facts	9
99933	2018-01-26 06:18:39	email	weekly-newsletter	115

## 2.5 What is the User Journey

### What is the typical user journey? LT,FT,Purchases

Based on the above slides the typical user Journey can be mapped. We were able to see what campaigns gathered first touches, last touches, and even last touches that resulted in a purchase.

The typical user journey results in the visitor discovering the website through the following campaigns :

- cool tshirts search (168 FT's)
- Getting to know cool tshirts (612 FT's)
- Interview with cool tshirts founder (622 FT's)
- Ten crazy cool t shirts facts (576 FT's)

Although these campaigns brought in the most first touches, they did not result in the most last touches or a purchases.

## 2.5 What is the User Journey Continued

What is the typical user journey? LT,FT,Purchases

Below are the top 4 campaigns for both most Last touches and Last touches resulting in a purchase:

Campaign	Last Touch total
retargetting-ad	443
weekly-newsletter	447
retargetting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190

Campaign	Last Touch W/ Purchase total
weekly-newsletter	115
retargetting-ad	113
retargetting-campaign	54
paid-search	52
ten-crazy-cool-tshirts-facts	9

As shown by the two tables, the most last touches does not always mean the visitor is purchasing a t shirt.

## 2.5 What is the User Journey Continued

What is the typical user journey?

Summary:

The typical user journey of CoolTShirts usually results in multiple visits to the website. The 4 campaigns on slide XX show the campaigns with first touches and only 2 of those campaigns (getting-to-know-cool-tshirts and ten-crazy-cool-tshirts-facts) show in the top five of last touches and 1 in the top five for last touches with a purchase (ten-crazy-cool-tshirts-facts).

This shows that certain campaigns result in better purchase rates. In conclusion, the typical user discovers CoolTShirts and is brought back again later by another campaign to complete a purchase.



### **3. Who to Re-Invest In?**

## 3.1 Who to Re – Invest In?

CoolTShirts can re – invest in 5 of there campaigns and it is important for them to pick the correct 5 in order to continue there success. Below is a list of the 5 campaigns I would re – invest in:

- Getting to know cool tshirts
- Interview with cool tshirts founder
- Ten crazy cool t shirts facts
- weekly-newsletter
- retargetting-ad

The first three listed should be re – invested in because they are resulting in the most awareness to the company, although they do not always directly result in a purchase.

The bottom two campaigns should be re – invested in due to because they are bringing in the highest rate of last touches resulting in a purchase.