



# CoolTShirts Capstone project

Learn SQL from Scratch

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1. Get familiar with CoolTShirts

# Get familiar with the company Question 1 exercise

1. 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.

3

1

```
SELECT COUNT(DISTINCT utm_campaign)
FROM page_visits;
```

```
COUNT(DISTINCT utm_campaign)
```

8

2

```
SELECT COUNT(DISTINCT utm_source)
FROM page_visits;
```

```
COUNT(DISTINCT utm_source)
```

6

```
SELECT DISTINCT utm_campaign, utm_source
FROM page_visits;
```

utm_campaign	utm_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

## Question 1. Get familiar with the company Questions and Answers

How many campaigns and sources does CoolTShirts use and how are they related?

CoolTShirts(CTS) uses 8 different campaigns along with 6 different sources. CTS generates interest in their products through media sources with ad campaigns that convey information about CoolTShirts. CTS then directly targets previous customers or ones that showed interest via search or site visit through email and Social media sources.

What pages are on their website? Distinct values of the page\_name column as follows 1 – landing page, 2 – shopping cart, 3 – checkout, 4 - purchase

```
SELECT DISTINCT page_name  
FROM page_visits;
```

page_name
1 – landing_page
2 – shopping_cart
3- checkout
4- - purchase

## 2. What is the user journey?

## 2. What is the user journey?

- How many first touches is each campaign responsible for ?

### Query and results

```
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 as ft  
    JOIN page_visits as pv  
      ON ft.user_id = pv.user_id  
     AND ft.first_touch_at = pv.timestamp  
)  
SELECT ft_attr.utm_source,  
       ft_attr.utm_campaign,  
       COUNT(*)  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

ft_attr.utm_source	ft_attr.utm_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

## 2. What is the user journey?

- How many last touches is each campaign responsible for ?

### Query and results

```
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,  
         pv.page_name  
  FROM last_touch as lt  
  JOIN page_visits as pv  
    ON lt.user_id = pv.user_id  
   AND lt.last_touch_at = pv.timestamp  
)  
SELECT lt_attr.utm_source,  
       lt_attr.utm_campaign,  
       COUNT(*)  
FROM lt_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

lt_attr.utm_sour ce	lt_attr.utm_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



## 2. What is the user journey?

- How many visitors make a purchase? 361 purchases

### Query and results

```
SELECT page_name, COUNT(page_name)
FROM page_visits
WHERE page_name = '4 - purchase'
GROUP BY page_name;
```

page_name	COUNT(page_name)
4 - purchase	361

## 2. What is the user journey?

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

Query and results below

```
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,  
         pv.page_name  
  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,  
       lt_attr.utm_campaign,  
       COUNT(*)  
FROM lt_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

lt_attr.utm_source	lt_attr.utm_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

## 2. What is the user journey?

- What is the typical user journey?

A typical CoolTShirts user would discover the company and its products through CoolTShirts various advertising campaigns via media sources leading interested readers to visit the CoolTShirts site to browse or make a purchase. Past customers or potential customers are enticed to revisit the site through targeted ads via social media and directly through email.

### 3. Optimize the campaign budget

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

CoolTShirts saw great benefit from the ad campaigns: getting-to-know-cool-tshirts, ten-crazy-cool-tshirts-facts, and interview-with-cool-tshirts-founder that generated interest and brought many visitors to the site, these 3 campaigns are directly attributed to First Touch along with being strong contributors to the Last Touch phase. The weekly newsletter via email and the re-targeting ads through Facebook campaigns were directly attributable to Last Touch and Final Purchase.

In summary together these 5 campaigns mentioned above were most instrumental in creating the interest in the CoolTShirts products and then bringing back potential customers to make the final purchase.