



Learn SQL FROM Scratch

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1. Get Familiar with CoolTshirts

- How many campaigns and sources does CoolTShirts use and how are they related?
 - **UTM_Source:** Identifies which touchpoint sent the traffic (Facebook, google, email, etc.)
 - **UTM_Campaign:** Identifies the specific ad or email blast (Retargeting-Ad, Weekly-Newsletter, Paid-Search, etc.)

```
4 Select Count(Distinct utm_campaign) AS 'Campagin Amount'
5 FROM page_visits;
6
7 Select Count(Distinct utm_source) AS 'Source Amount'
8 FROM page_visits;
9
10 Select Distinct utm_campaign AS 'Campaigns', utm_source AS
    'Sources'
11 FROM page_visits;
```

Campagin Amount	
8	
Source Amount	
6	
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

1. Get Familiar with CoolTshirts

- What Pages are on their website?
 - Select page_name column to obtain the list of actual pages within the website such as landing-page, shopping-cart, checkout and purchase
 - Distinct query can return the unique values associated with your column request

```
1 Select Distinct page_name AS 'Page Name'  
2 FROM page_visits;
```

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

2. What is the user journey?

- How many first touches is each campaign responsible for?
- Use the MIN statement to identify the timestamps first touch

```
1 WITH first_touch AS (  
2   SELECT user_id,  
3   MIN(timestamp) as 'first_touch_at'  
4   FROM page_visits  
5   GROUP BY user_id),  
6   ft_attr AS (  
7   SELECT ft.user_id,  
8   ft.first_touch_at,  
9   pv.utm_source,  
10  pv.utm_campaign  
11  FROM first_touch 'ft'  
12  JOIN page_visits 'pv'  
13  ON ft.user_id = pv.user_id  
14  AND ft.first_touch_at = pv.timestamp  
15  )  
16  SELECT ft_attr.utm_source AS 'Source',  
17  ft_attr.utm_campaign AS 'Campaign',  
18  COUNT(*) AS 'Count'  
19  FROM ft_attr  
20  GROUP BY 1, 2  
21  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

2. What is the user journey?

- How many last touches is each campaign responsible for?
- Use the MAX statement to identify the timestamps last touch

```
1  WITH last_touch AS (  
2    SELECT user_id,  
3    MAX(timestamp) as 'last_touch_at'  
4  FROM page_visits  
5  GROUP BY user_id),  
6  lt_attr AS (  
7    SELECT lt.user_id,  
8    lt.last_touch_at,  
9    pv.utm_source,  
10   pv.utm_campaign  
11  FROM last_touch 'lt'  
12  JOIN page_visits 'pv'  
13  ON lt.user_id = pv.user_id  
14  AND lt.last_touch_at = pv.timestamp  
15  )  
16  SELECT lt_attr.utm_source AS 'Source',  
17  lt_attr.utm_campaign AS 'Campaign',  
18  COUNT(*) AS 'Count'  
19  FROM lt_attr  
20  GROUP BY 1, 2  
21  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

2. What is the user journey?

- How many visitors make a purchase?
 - Use a WHERE statement to find those that purchase from the '4 – purchase' page

```
1 Select Count(Distinct user_id) AS 'Purchasing Customers'  
2 FROM page_visits  
3 WHERE page_name = '4 - purchase';
```

Purchasing Customers
361

2. What is the user journey?

- How last touches on the purchase page is each campaign responsible for?
- Use the MAX statement to identify the timestamps last touch
- Use a WHERE statement to find those that purchase from the '4 – purchase' page

```
1 WITH last_touch AS (  
2     SELECT user_id,  
3         MAX(timestamp) as 'last_touch_at'  
4     FROM page_visits  
5     WHERE page_name = '4 - purchase'  
6     GROUP BY user_id),  
7     lt_attr AS (  
8     SELECT lt.user_id,  
9         lt.last_touch_at,  
10        pv.utm_campaign  
11     FROM last_touch 'lt'  
12     JOIN page_visits 'pv'  
13         ON lt.user_id = pv.user_id  
14         AND lt.last_touch_at = pv.timestamp  
15     )  
16     SELECT lt_attr.utm_campaign AS 'Campaign',  
17         COUNT(*) AS 'Count'  
18     FROM lt_attr  
19     GROUP BY 1  
20     ORDER BY 2 DESC;
```

Campaign	Count
weekly-newsletter	115
retargeting-ad	113
retargeting-campaign	54
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
cool-tshirts-search	2

2. What is the user journey?

- What is the TYPICAL user journey?
 - First Touch:
 - Majority of users are coming from engaging content that relates to interviews and facts about the page or company
 - Last Touch/Last Touch Purchase:
 - 45% of consumers are purchasing from their last touch through weekly newsletters and retargeting ads.

First Touch

Campaign	Count
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

Last Touch

Campaign	Count
weekly-newsletter	447
retargeting-ad	443
retargeting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184
paid-search	178
cool-tshirts-search	60

Last Touch Purchases

Campaign	Count
weekly-newsletter	115
retargeting-ad	113
retargeting-campaign	54
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
cool-tshirts-search	2

3. Optimize the campaign budget

- CoolTshirts can re-invest in 5 campaigns. Which should they pick and why?
- CoolTshirts should optimize the top 3 first touch campaigns to continue to drive traffic and push then consumers down the purchasing funnel by utilizing weekly-newsletters as an awareness play and retargeting those who trafficked the interview and fact campaigns to drive additional purchases.

Campaigns	First Touches	Last Touches	Purchases
Interview-with cool-tshirts-founder	622		
getting-to-know-cool-tshirts	612		
ten-crazy-cool-tshirts-facts	576		
weekly-newsletter		447	115
retargeting-ad		443	113