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First- and Last0 Touch Attribution with CoolTShirts.com

Learn SQL from Scratch

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1. Get familiar with the company

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

- First need to know the number of distinct campaigns

COUNT(DISTINCT utm_campaign)	COUNT(DISTINCT utm_source)
8	6

- Second, need to list the distinct campaign names and distinct source names

utm_campaign
getting-to-know-cool-tshirts
weekly-newsletter
ten-crazy-cool-tshirts-facts
retargeting-campaign
retargeting-ad
interview-with-cool-tshirts-founder
paid-search
cool-tshirts-search

utm_source
nytimes
email
buzzfeed
facebook
medium
Google

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

```
-- for campaigns use  
SELECT DISTINCT utm_campaign  
FROM page_visits;
```

```
-- for sources use  
SELECT DISTINCT utm_source  
FROM page_visits;
```

- Third, how are the source and campaign related

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

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

Conclusion:

There are a total of 8 different marketing campaigns and 6 different sources used by CoolTShirts.com, which means 2 of the campaigns used the same source.

1.2 What pages are on their website?

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

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

Conclusion:

CoolTShirts website has 4 pages.

2. What is the user journey?

2.1 How many first touches is each campaign responsible for?

user_id	COUNT(ft.first_touch_at)	utm_source	utm_campaign
99684	169	google	cool-tshirts-search
99933	612	nytimes	getting-to-know-cool-tshirts
99990	622	medium	interview-with-cool-tshirts-founder
99765	576	buzzfeed	ten-crazy-cool-tshirts-facts

```
-- how many first touches is each campaign responsible for
WITH first_touch AS (
  SELECT user_id,
    MIN(timestamp) as first_touch_at
  FROM page_visits
  GROUP BY user_id)
SELECT ft.user_id,
  COUNT(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
GROUP BY pv.utm_campaign;
```

Conclusion:

The most successful marketing campaign was the interview with the CoolTShirt founder, it generated a total of 622 visits to the CoolTShirt website.

2.2 How many last touches is each campaign responsible for?

user_id	COUNT(lt.last_touch_at)	utm_source	utm_campaign
99344	60	google	cool-tshirts-search
99589	232	nytimes	getting-to-know-cool-tshirts
99838	184	medium	interview-with-cool-tshirts-founder
98840	178	google	paid-search
99928	443	facebook	retargetting-ad
99990	245	email	retargetting-campaign
99765	190	buzzfeed	ten-crazy-cool-tshirts-facts
99933	447	email	weekly-newsletter

```
--number of last touches per campaign
WITH last_touch AS (
  SELECT user_id,
    MAX(timestamp) as last_touch_at
  FROM page_visits
  GROUP BY user_id)
SELECT lt.user_id,
  COUNT(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
GROUP BY pv.utm_campaign;
```

Conclusion:

The weekly newsletter marketing campaign was responsible for the most last touches.

2.4 How many visitors make a purchase?

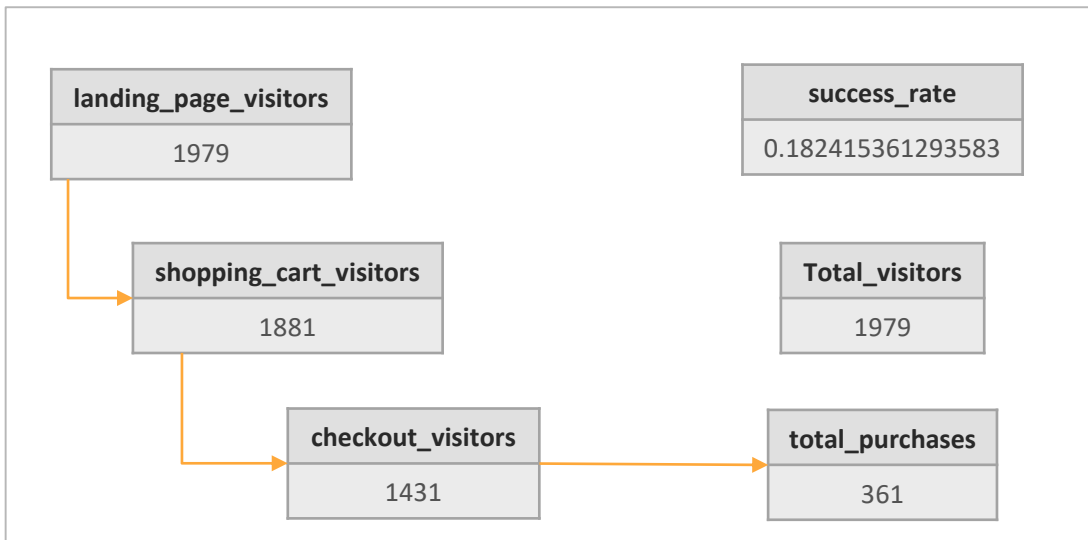
COUNT(DISTINCT user_id)
361

```
-- how many visitors make a purchase
SELECT COUNT(DISTINCT user_id)
FROM page_visits
WHERE page_name = '4 - purchase';
```

Conclusion:

A total of 361 visitors end up making a purchase.

2.5 What is the typical user journey?



Conclusion:

The CoolTShirts Marketing campaigns generate 1979 visits but only 361 purchase, which is a Success Rate of 18%.

The biggest drop is on '3 – checkout' page, which leads to think the check out process may needs some work

```
-- how many visitors does CoolTShirts had
SELECT COUNT(DISTINCT user_id) AS Total_visitors
FROM page_visits;
```

```
-- CoolTShirt Marketing campaigns success rate
SELECT 1.0*
```

```
(
  SELECT COUNT(DISTINCT user_id)
  FROM page_visits
  WHERE page_name = '4 - purchase'
)/(
  SELECT COUNT(DISTINCT user_id)
  FROM page_visits
) AS success_rate;
```

```
-- at wich step of the user journey CoolTShirt loose the most customers
SELECT COUNT(DISTINCT user_id) AS landing_page_visitors
FROM page_visits
WHERE page_name = '1 - landing_page';
```

```
SELECT COUNT(DISTINCT user_id) AS shopping_cart_visitors
FROM page_visits
WHERE page_name = '2 - shopping_cart';
```

```
SELECT COUNT(DISTINCT user_id) AS checkout_visitors
FROM page_visits
WHERE page_name = '3 - checkout';
```

```
SELECT COUNT(DISTINCT user_id) AS total_purchases
FROM page_visits
WHERE page_name = '4 - purchase';
```

3. Optimize the campaign budget

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

user_id	COUNT(lt.last_touch_at)	utm_source	utm_campaign
95650	2	google	cool-tshirts-search
92172	9	nytimes	getting-to-know-cool-tshirts
83547	7	medium	interview-with-cool-tshirts-founder
94567	52	google	paid-search
99897	112	facebook	retargetting-ad
99285	53	email	retargetting-campaign
98651	9	buzzfeed	ten-crazy-cool-tshirts-facts
99933	114	email	weekly-newsletter

--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  
  GROUP BY user_id)  
SELECT lt.user_id,  
       COUNT(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  
WHERE page_name = '4 - purchase'  
GROUP BY pv.utm_campaign;
```

Conclusion:

The 5 marketing campaigns are:

1. Weekly Newsletter generated the most purchases (total of 114)
2. Retargeting Advertisement second most purchases generated (total of 112)
3. Retargeting Campaign third most purchases generated (total of 53)
4. Paid search fourth most purchased generated (total of 52)
5. Ten crazy cool t-shirt facts and Getting to know cool t-shirts generated the same number of purchases (total of 9 each)