

Zuber Ride Sharing

Rose Hagerty

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You're working as an analyst for Zuber, a new ride-sharing company that's launching in Chicago. Your task is to find patterns in the available information. You want to understand passenger preferences and the impact of external factors on rides.

You'll study a database, analyze data from competitors, and investigate the impact of weather on ride frequency.

1. Print the *company_name* field. Find the number of taxi rides for each taxi company for November 15-16, 2017, name the resulting field *trips_amount* and print it, too. Sort the results by the *trips_amount* field in descending order.

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```
1  Select
2      cabs.company_name, count(trips.trip_id) as trips_amount
3  from
4      cabs
5      INNER JOIN trips on trips.cab_id = cabs.cab_id
6  WHERE
7      cast(trips.start_ts as date) between '2017-11-15' AND '2017-11-16'
8  GROUP BY company_name
9  ORDER BY trips_amount desc;
```

Result

company_name	trips_amount
Flash Cab	19558
Taxi Affiliation Services	11422
Medallion Leasin	10367
Yellow Cab	9888
Taxi Affiliation Service Yellow	9299
Chicago Carriage Cab Corp	9181
City Service	8448

2. Find the number of rides for every taxi company whose name contains the words "Yellow" or "Blue" for November 1-7, 2017. Name the resulting variable *trips_amount*. Group the results by the *company_name* field.

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```
1  SELECT
2      cabs.company_name as company_name,
3      COUNT(trips.trip_id) AS trips_amount
4  FROM
5      cabs
6  INNER JOIN
7      trips
8  ON
9      trips.cab_id = cabs.cab_id
10 WHERE
11     CAST(trips.start_ts AS date) BETWEEN '2017-11-01'
12 AND '2017-11-07'
13     AND cabs.company_name LIKE '%%Yellow%%'
14 GROUP BY company_name
15 UNION ALL
16 SELECT
17     cabs.company_name as company_name,
18     COUNT(trips.trip_id) AS trips_amount
19 FROM
20     cabs
21 INNER JOIN
22     trips
23 ON
24     trips.cab_id = cabs.cab_id
25 WHERE
26     CAST(trips.start_ts AS date) BETWEEN '2017-11-01'
27 AND '2017-11-07'
28     AND cabs.company_name LIKE '%%Blue%%'
29 GROUP BY company_name;
```

Result

company_name	trips_amount
Taxi Affiliation Service Yellow	29213
Yellow Cab	33668
Blue Diamond	6764
Blue Ribbon Taxi Association Inc.	17675

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3. For November 1-7, 2017, the most popular taxi companies were Flash Cab and Taxi Affiliation Services. Find the number of rides for these two companies and name the resulting variable *trips_amount*. Join the rides for all other companies in the group "Other." Group the data by taxi company names. Name the field with taxi company names *company*. Sort the result in descending order by *trips_amount*.

```
1  SELECT
2      CASE
3          WHEN company_name = 'Flash Cab' THEN 'Flash Cab'
4          WHEN company_name = 'Taxi Affiliation Services'
5      THEN 'Taxi Affiliation Services'
6          ELSE 'Other'
7      END AS company,
8      COUNT(trips.trip_id) as trips_amount
9  FROM
10     cabs
11  INNER JOIN
12     trips
13  ON
14     trips.cab_id = cabs.cab_id
15  WHERE
16     CAST(trips.start_ts AS date) BETWEEN '2017-11-01' AND
17     '2017-11-07'
18  GROUP BY
19     company
20  ORDER BY
21     trips_amount DESC;
```

Result

company	trips_amount
Other	335771
Flash Cab	64084
Taxi Affiliation Services	37583

4. Retrieve the identifiers of the O'Hare and Loop neighborhoods from the *neighborhoods* table.

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```
1  SELECT
2      neighborhood_id,
3      name
4  FROM
5      neighborhoods
6  WHERE
7      name LIKE '%Hare' OR name LIKE 'Loop' OR name LIKE 'Loop'
8
```

Result

neighborhood_id	name
50	Loop
63	O'Hare

5. For each hour, retrieve the weather condition records from the *weather_records* table. Using the CASE operator, break all hours into two groups: **Bad** if the *description* field contains the words **rain** or **storm**, and **Good** for others. Name the resulting field *weather_conditions*. The final table must include two fields: date and hour (*ts*) and *weather_conditions*.

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```
1  SELECT
2      ts,
3      CASE
4          WHEN description LIKE '%rain%' OR description LIKE
5              '%storm%' THEN 'Bad'
6          ELSE 'Good'
7      END AS weather_conditions
8  FROM
9      weather_records;
```

Result

ts	weather_conditions
2017-11-01 00:00:00	Good
2017-11-01 01:00:00	Good
2017-11-01 02:00:00	Good
2017-11-01 03:00:00	Good
2017-11-01 04:00:00	Good

6. Retrieve from the *trips* table all the rides that started in the Loop (*pickup_location_id*: 50) on a Saturday and ended at O'Hare (*dropoff_location_id*: 63). Get the weather conditions for each ride. Use the method you applied in the previous task. Also, retrieve the duration of each ride. Ignore rides for which data on weather conditions is not available.

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The table columns should be in the following order:

start_ts

weather_conditions

duration_seconds

Sort by *trip_id*.

```
1          SELECT
2      start_ts,
3      T.weather_conditions,
4      duration_seconds
5  FROM
6      trips
7  INNER JOIN (
8      SELECT
9          ts,
10         CASE
11             WHEN description LIKE '%rain%' OR description LIKE
12             '%storm%' THEN 'Bad'
13             ELSE 'Good'
14         END AS weather_conditions
15     FROM
16         weather_records
17 ) T ON T.ts = trips.start_ts
18 WHERE
19     pickup_location_id = 50 AND dropoff_location_id = 63 AND EXTRACT
20     (DOW from trips.start_ts) = 6
21 ORDER BY trip_id
```

Result

start_ts	weather_conditions	duration_seconds
2017-11-25 12:00:00	Good	1380
2017-11-25 16:00:00	Good	2410
2017-11-25 14:00:00	Good	1920
2017-11-25 12:00:00	Good	1543
2017-11-04 10:00:00	Good	2512