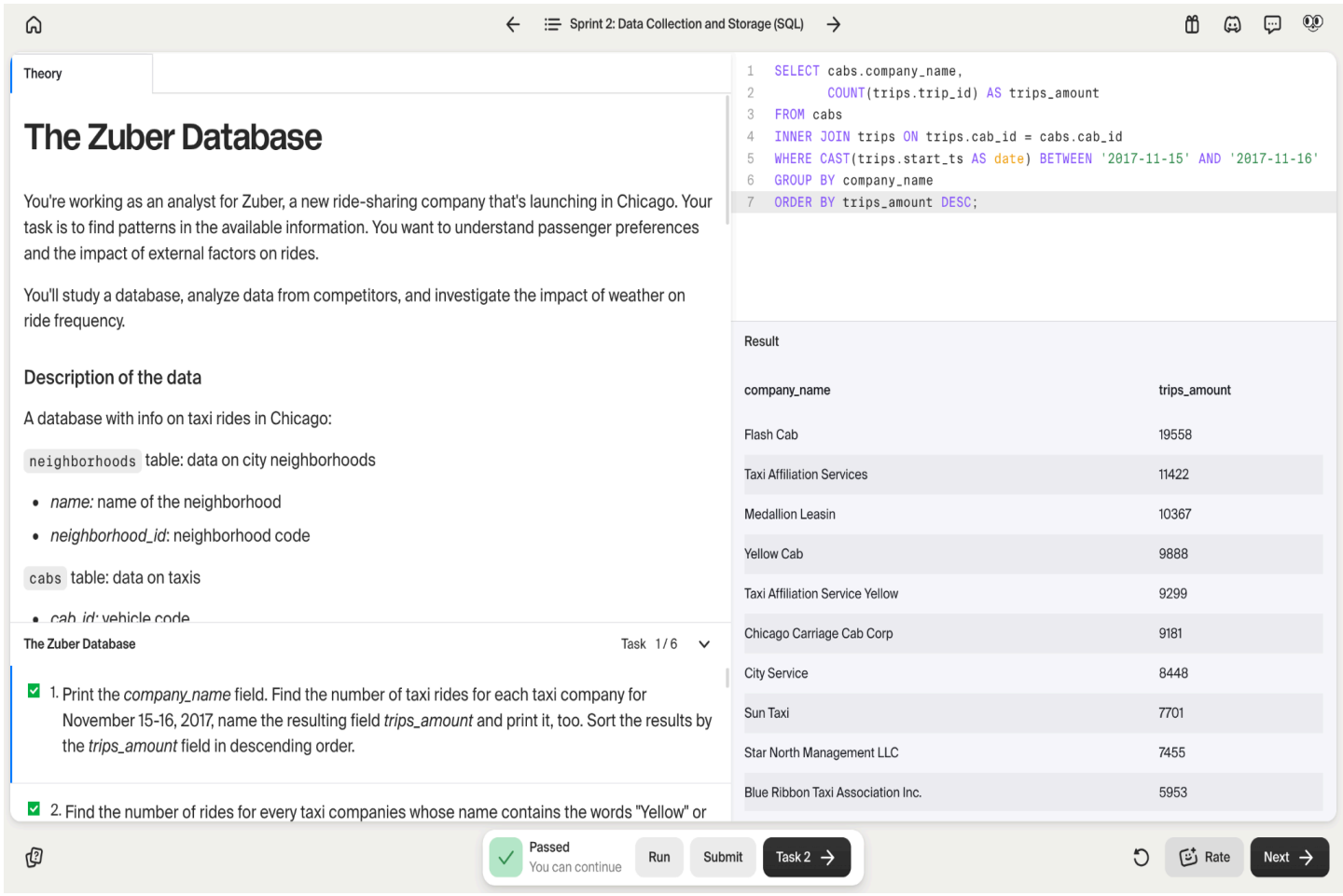
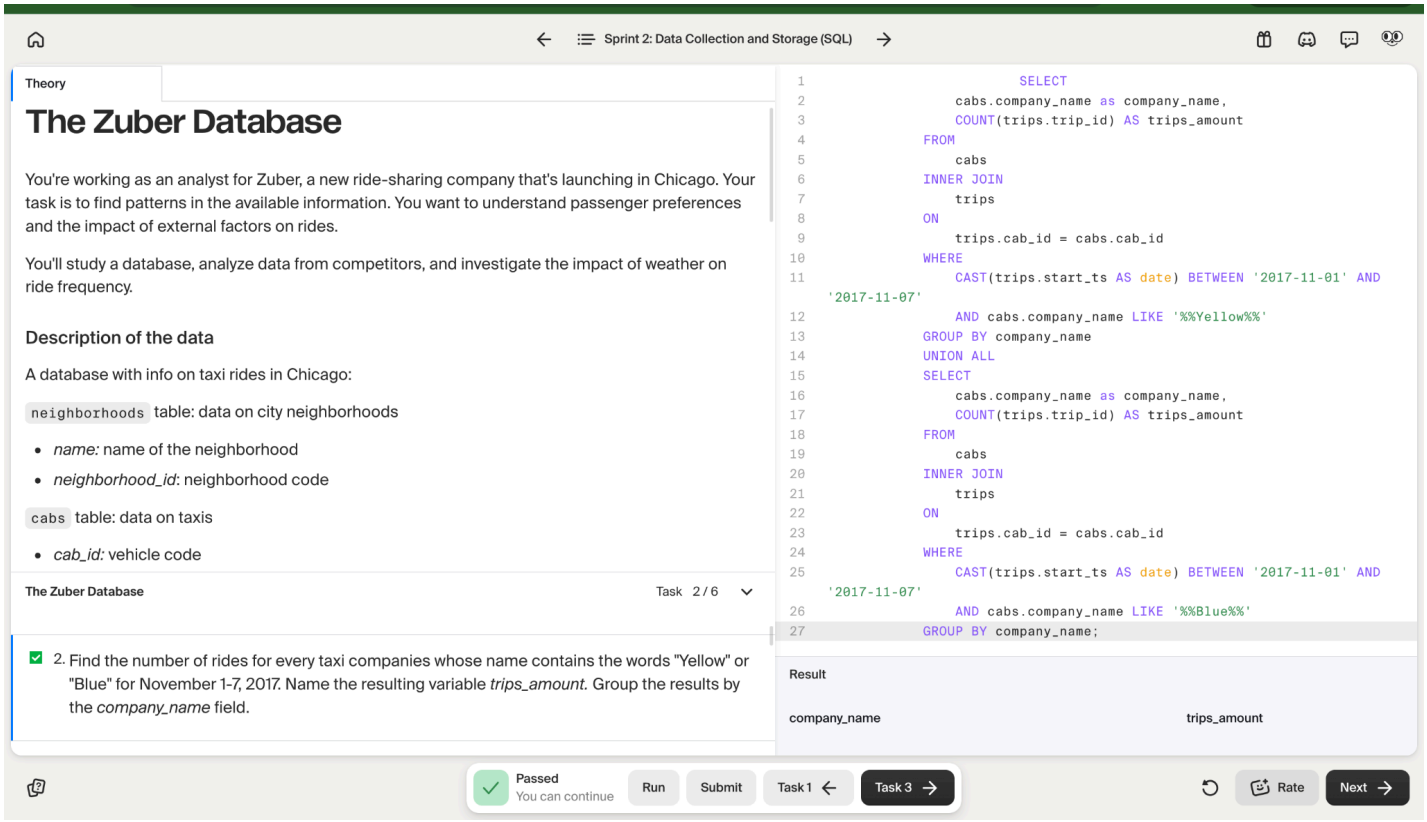

Sprint 2: Data Collection and Storage (SQL)
Theory
The Zuber Database
You're working as an analyst for Zuber, a new ride-sharing company that's launching in Chicago. Your task is to find patterns in the available information. You want to understand passenger preferences and the impact of external factors on rides.
You'll study a database, analyze data from competitors, and investigate the impact of weather on ride frequency.
Description of the data
A database with info on taxi rides in Chicago:
neighborhoods table: data on city neighborhoods
name: name of the neighborhood
neighborhood_id: neighborhood code
cabs table: data on taxis
cab_id: vehicle code
The Zuber Database
Task 1 / 6
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.
2. Find the number of rides for every taxi companies whose name contains the words "Yellow" or
SELECT cabs.company_name,
COUNT(trips.trip_id) AS trips_amount
FROM cabs
INNER JOIN trips ON trips.cab_id = cabs.cab_id
WHERE CAST(trips.start_ts AS date) BETWEEN '2017-11-15' AND '2017-11-16'
GROUP BY company_name
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
Sun Taxi
7701
Star North Management LLC
7455
Blue Ribbon Taxi Association Inc.
5953
Passed
You can continue
Run
Submit
Task 2
Rate
Next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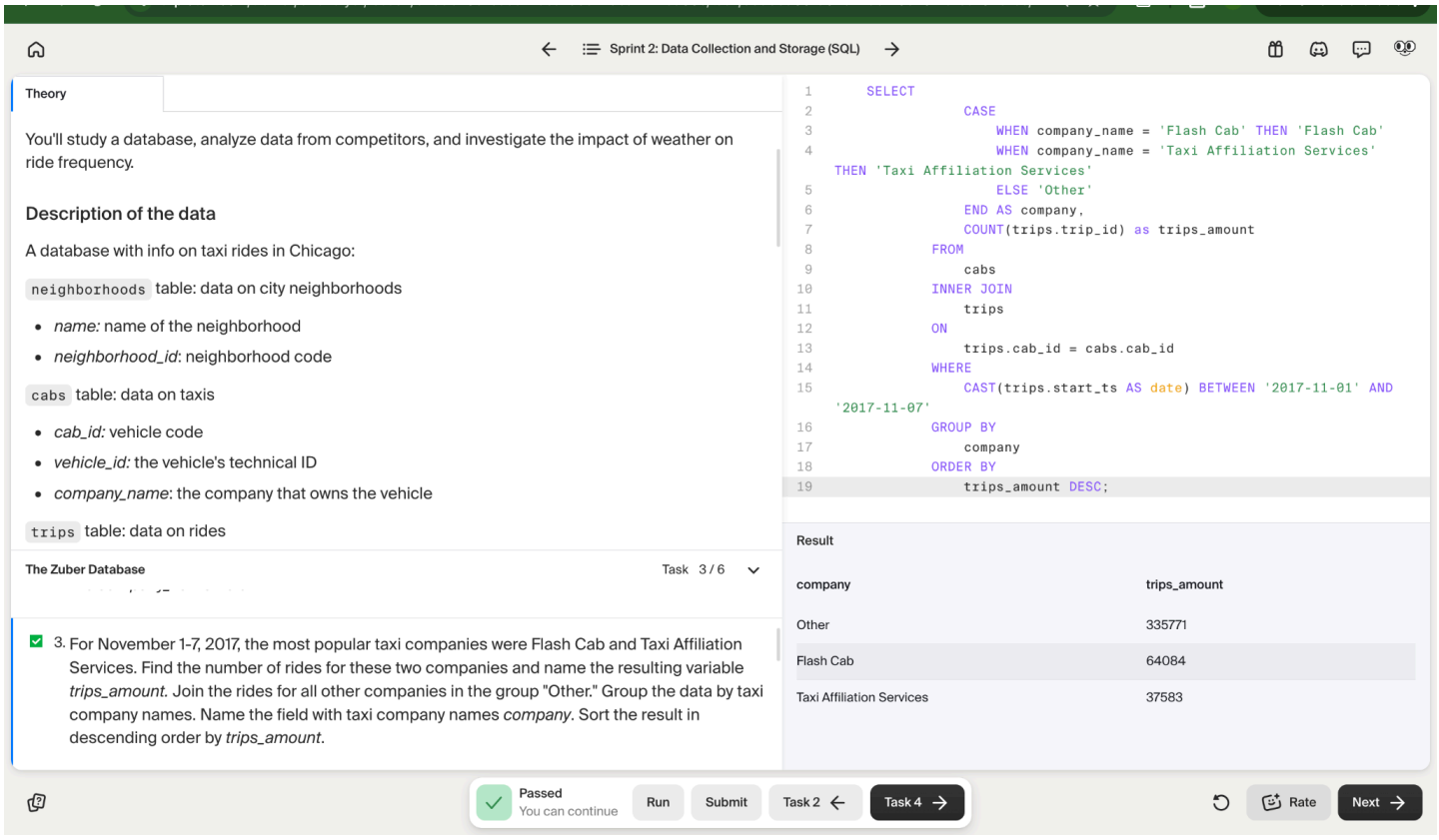
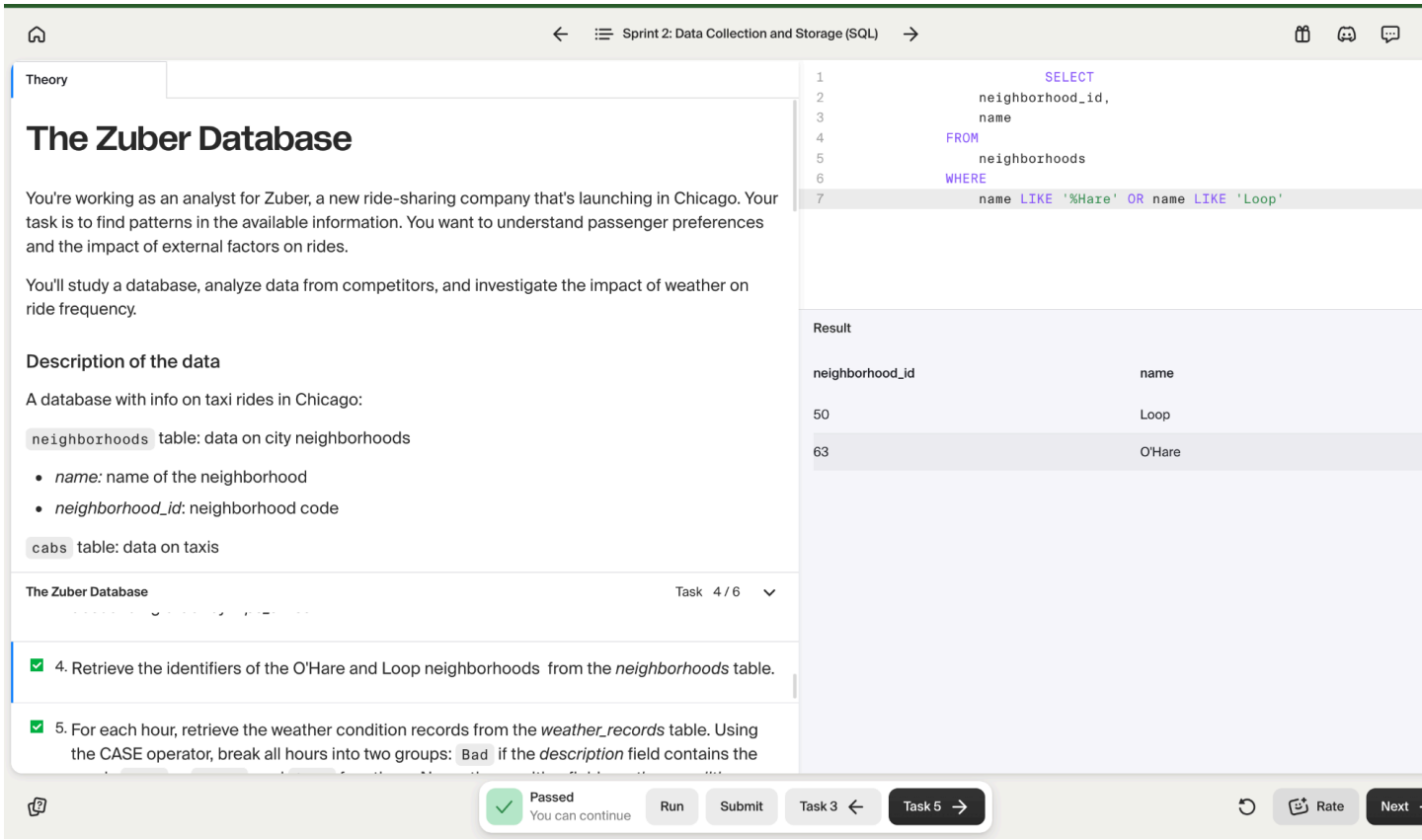
cabs table: data on taxis
cab_id: vehicle code
The Zuber Database
Task 2 / 6
2. Find the number of rides for every taxi companies whose name contains the words "Yellow" or "Blue" for November 1-7, 2017. Name the resulting variable trips_amount. Group the results by the company_name field.
SELECT
cabs.company_name as company_name,
COUNT(trips.trip_id) AS trips_amount
FROM
cabs
INNER JOIN
trips
ON
trips.cab_id = cabs.cab_id
WHERE
CAST(trips.start_ts AS date) BETWEEN '2017-11-01' AND '2017-11-07'
AND cabs.company_name LIKE '%%Yellow%%'
GROUP BY company_name
UNION ALL
SELECT
cabs.company_name as company_name,
COUNT(trips.trip_id) AS trips_amount
FROM
cabs
INNER JOIN
trips
ON
trips.cab_id = cabs.cab_id
WHERE
CAST(trips.start_ts AS date) BETWEEN '2017-11-01' AND '2017-11-07'
AND cabs.company_name LIKE '%%Blue%%'
GROUP BY company_name;
Result
company_name
trips_amount
Passed
You can continue
Run
Submit
Task 1
Task 3
Rate
Next


Sprint 2: Data Collection and Storage (SQL)
Theory
You'll study a database, analyze data from competitors, and investigate the impact of weather on ride frequency.
Description of the data
A database with info on taxi rides in Chicago:
neighborhoods table: data on city neighborhoods
name: name of the neighborhood
neighborhood_id: neighborhood code
cabs table: data on taxis
cab_id: vehicle code
vehicle_id: the vehicle's technical ID
company_name: the company that owns the vehicle
trips table: data on rides
The Zuber Database
Task 3 / 6
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.
SELECT
CASE
WHEN company_name = 'Flash Cab' THEN 'Flash Cab'
WHEN company_name = 'Taxi Affiliation Services' THEN 'Taxi Affiliation Services'
ELSE 'Other'
END AS company,
COUNT(trips.trip_id) as trips_amount
FROM
cabs
INNER JOIN
trips
ON
trips.cab_id = cabs.cab_id
WHERE
CAST(trips.start_ts AS date) BETWEEN '2017-11-01' AND '2017-11-07'
GROUP BY
company
ORDER BY
trips_amount DESC;
Result
company
trips_amount
Other
335771
Flash Cab
64084
Taxi Affiliation Services
37583
Passed
You can continue
Run
Submit
Task 2
Task 4
Rate
Next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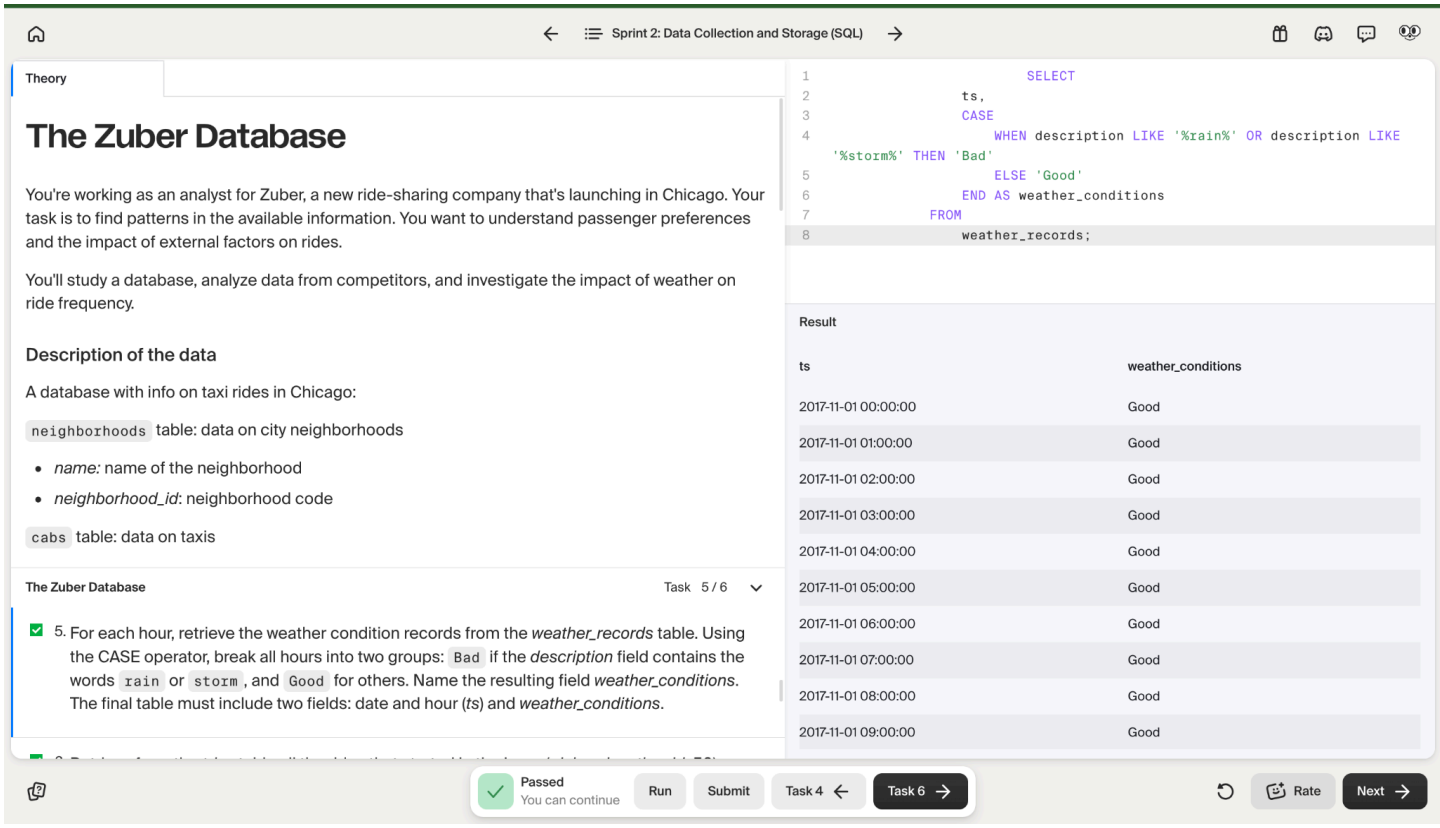
neighborhood_id: neighborhood code
cabs table: data on taxis
The Zuber Database
Task 4 / 6
4. Retrieve the identifiers of the O'Hare and Loop neighborhoods from the neighborhoods table.
5. For each hour, retrieve the weather condition records from the weather_records table. Using the CASE operator, break all hours into two groups: Bad if the description field contains the
SELECT
neighborhood_id,
name
FROM
neighborhoods
WHERE
name LIKE '%Hare' OR name LIKE 'Loop'
Result
neighborhood_id
name
50
Loop
63
O'Hare
Passed
You can continue
Run
Submit
Task 3
Task 5
Rate
Next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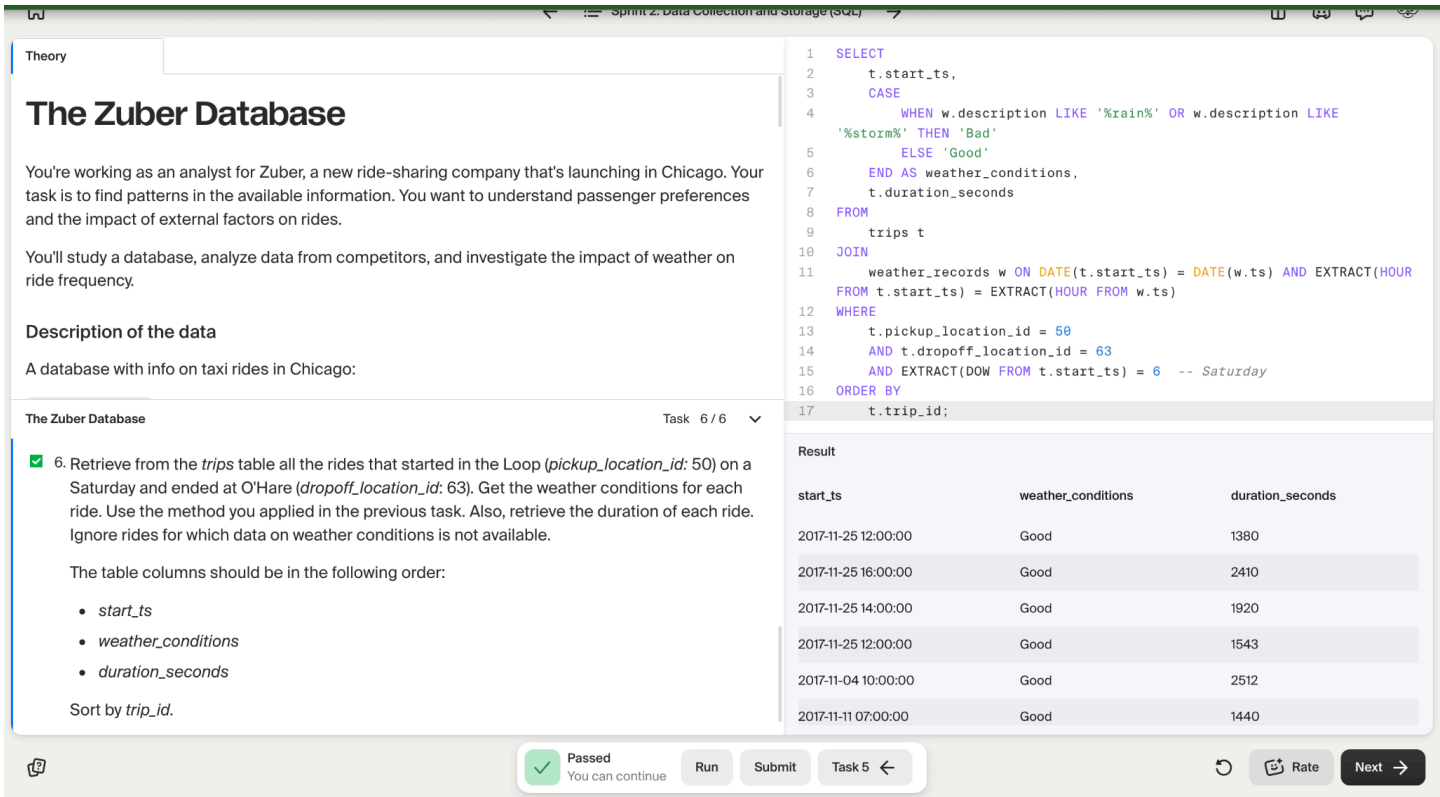
cabs table: data on taxis
The Zuber Database
Task 5 / 6
5. For each hour, retrieve the weather condition records from the weather_records table. Using the CASE operator, break all hours into two groups: Bad if the description field contains the words rain or storm, and Good for others. Name the resulting field weather_conditions. The final table must include two fields: date and hour (ts) and weather_conditions.
SELECT
ts,
CASE
WHEN description LIKE '%rain%' OR description LIKE '%storm%' THEN 'Bad'
ELSE 'Good'
END AS weather_conditions
FROM
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
2017-11-01 05:00:00
Good
2017-11-01 06:00:00
Good
2017-11-01 07:00:00
Good
2017-11-01 08:00:00
Good
2017-11-01 09:00:00
Good
Passed
You can continue
Run
Submit
Task 4
Task 6
Rate
Next


Theory
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Description of the data
A database with info on taxi rides in Chicago:
The Zuber Database
Task 6 / 6
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.
The table columns should be in the following order:
start_ts
weather_conditions
duration_seconds
Sort by trip_id.
SELECT
t.start_ts,
CASE
WHEN w.description LIKE '%rain%' OR w.description LIKE '%storm%' THEN 'Bad'
ELSE 'Good'
END AS weather_conditions,
t.duration_seconds
FROM
trips t
JOIN
weather_records w ON DATE(t.start_ts) = DATE(w.ts) AND EXTRACT(HOUR FROM t.start_ts) = EXTRACT(HOUR FROM w.ts)
WHERE
t.pickup_location_id = 50
AND t.dropoff_location_id = 63
AND EXTRACT(DOW FROM t.start_ts) = 6 -- Saturday
ORDER BY
t.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
2017-11-11 07:00:00
Good
1440
Passed
You can continue
Run
Submit
Task 5
Rate
Next