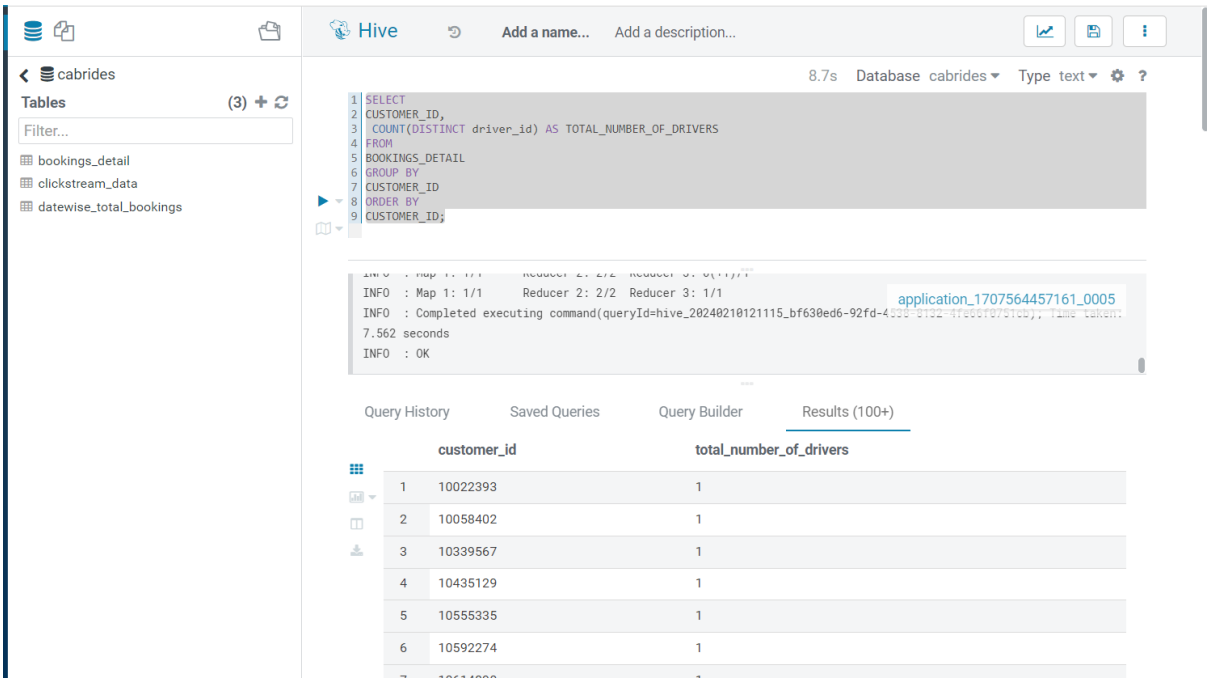
# Queries

**Task 5**: Calculate the total number of different drivers for each customer

**QUERY**:

```
SELECT CUSTOMER_ID, COUNT(DISTINCT driver_id) AS TOTAL_NUMBER_OF_DRIVERS
FROM BOOKINGS_DETAIL
GROUP BY CUSTOMER_ID
ORDER BY CUSTOMER_ID;
```

**OUTPUT**:




**VALIDATION:** Exact Match

1. When you run the query to calculate the total number of different drivers for each customer, you would get an output as shown below:

```
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2020-11-17 12:23:06,034 Stage-1 map = 0%,  reduce = 0%
2020-11-17 12:23:12,394 Stage-1 map = 100%,  reduce = 0%, Cumulative CPU 3.27 sec
2020-11-17 12:23:20,727 Stage-1 map = 100%,  reduce = 100%, Cumulative CPU 7.69 sec
MapReduce Total cumulative CPU time: 7 seconds 690 msec
Ended Job = job_1605615116654_0005
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   Cumulative CPU: 7.69 sec   HDFS Read: 43007 HDFS Write: 11000 SUCCESS
Total MapReduce CPU Time Spent: 7 seconds 690 msec
OK
10022393        1
10058402        1
10339567        1
10435129        1
10555335        1
10592274        1
10614890        1
10678994        1
11264797        1
11353346        1
11418437        1
11438890        1
11454977        1
11479815        1
11518953        1
11580321        1
11596512        1
11608791        1
11655671        1
11757536        1
11764909        1
11860278        1
11981042        1
12106105        1
12142182        1
12312603        1
12334699        1
12367832        1
12856708        1
12885363        1
12913608        1
12914577        1
12966909        1
13015449        1
13229062        1
```

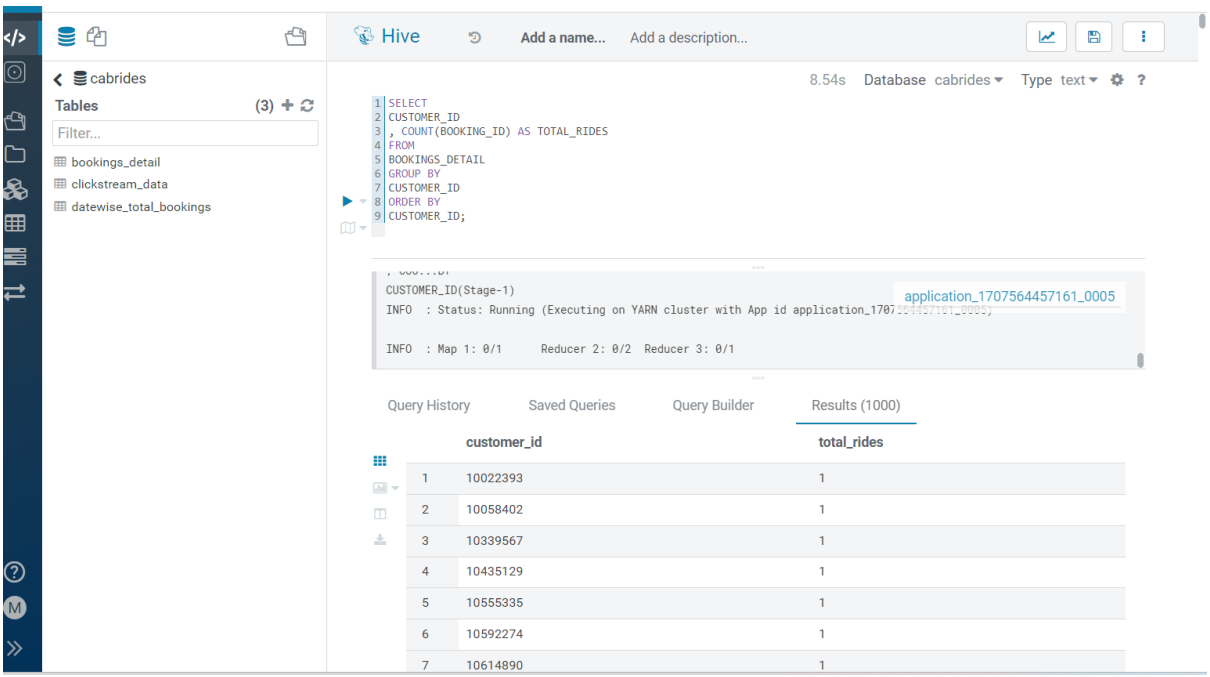
- **Task 6**:

Calculate the total rides taken by each customer.

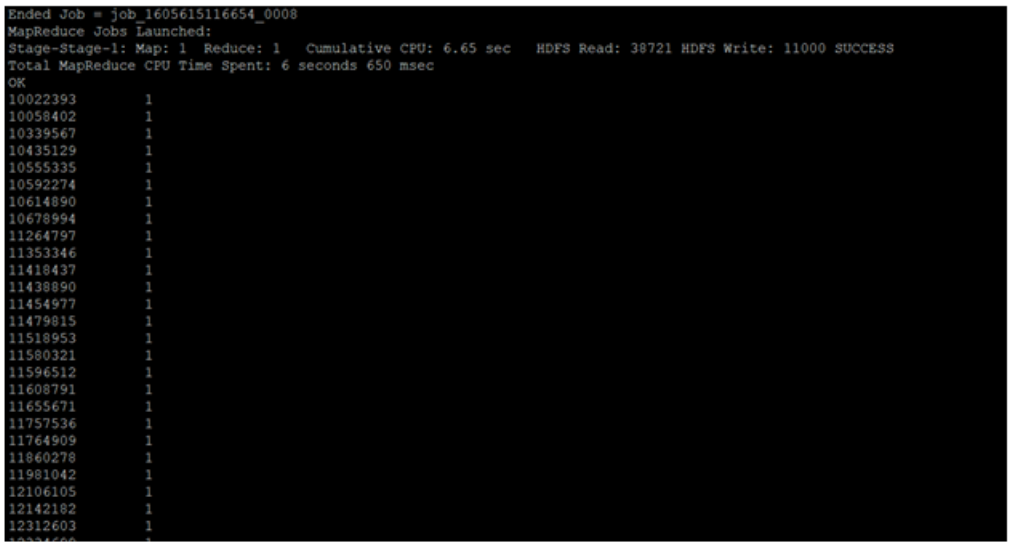
**QUERY:**

```
SELECT CUSTOMER_ID, COUNT(BOOKING_ID) AS TOTAL_RIDES
FROM BOOKINGS_DETAIL
GROUP BY CUSTOMER_ID
ORDER BY CUSTOMER_ID;
```

**OUTPUT**:




**VALIDATION:** Exact Match



```
Ended Job = job_1605615116654_0008
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   Cumulative CPU: 6.65 sec   HDFS Read: 38721 HDFS Write: 11000 SUCCESS
Total MapReduce CPU Time Spent: 6 seconds 650 msec
OK
10022393        1
10058402        1
10339567        1
10435129        1
10555335        1
10592274        1
10614890        1
10678994        1
11264797        1
11353346        1
11418437        1
11438890        1
11454977        1
11479815        1
11518953        1
11580321        1
11596512        1
11608791        1
11655671        1
11757536        1
11764909        1
11860278        1
11981042        1
12106105        1
12142182        1
12312603        1
```

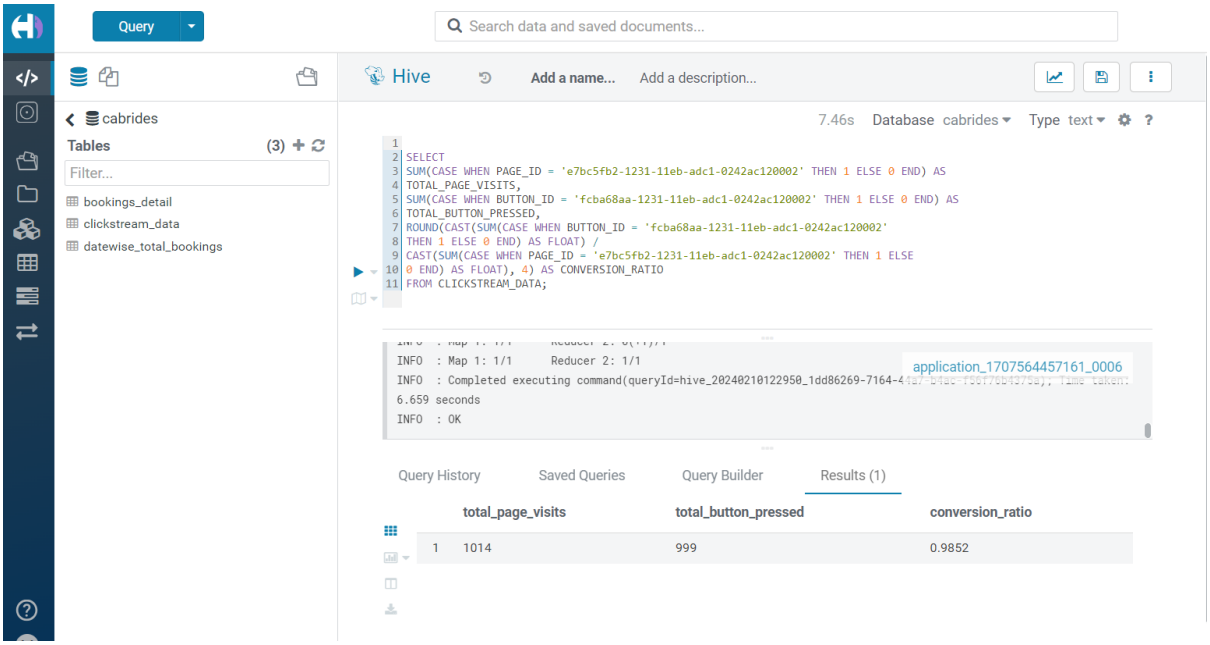
- **Task 7:**

Find the total visits made by each customer on the booking page and the total ‘Book Now’ button presses. This can show the conversion ratio.
The booking page id is ‘e7bc5fb2-1231-11eb-adc1-0242ac120002’.
The Book Now button id is ‘fcba68aa-1231-11eb-adc1-0242ac120002’. You also need to calculate the conversion ratio as part of this task. Conversion ratio can be calculated as Total 'Book Now' Button Press/Total Visits made by customer on the booking page.

**QUERY:**

```
SELECT
SUM(CASE WHEN PAGE_ID = 'e7bc5fb2-1231-11eb-adc1-0242ac120002' THEN 1 ELSE 0
END) AS
TOTAL_PAGE_VISITS,
SUM(CASE WHEN BUTTON_ID = 'fcba68aa-1231-11eb-adc1-0242ac120002' THEN 1 ELSE 0
END) AS
TOTAL_BUTTON_PRESSED,
ROUND(CAST(SUM(CASE WHEN BUTTON_ID = 'fcba68aa-1231-11eb-adc1-0242ac120002'
THEN 1 ELSE 0 END) AS FLOAT) /
CAST(SUM(CASE WHEN PAGE_ID = 'e7bc5fb2-1231-11eb-adc1-0242ac120002' THEN 1
ELSE
0 END) AS FLOAT), 4) AS CONVERSION_RATIO
FROM CLICKSTREAM_DATA;
```

**OUTPUT:**



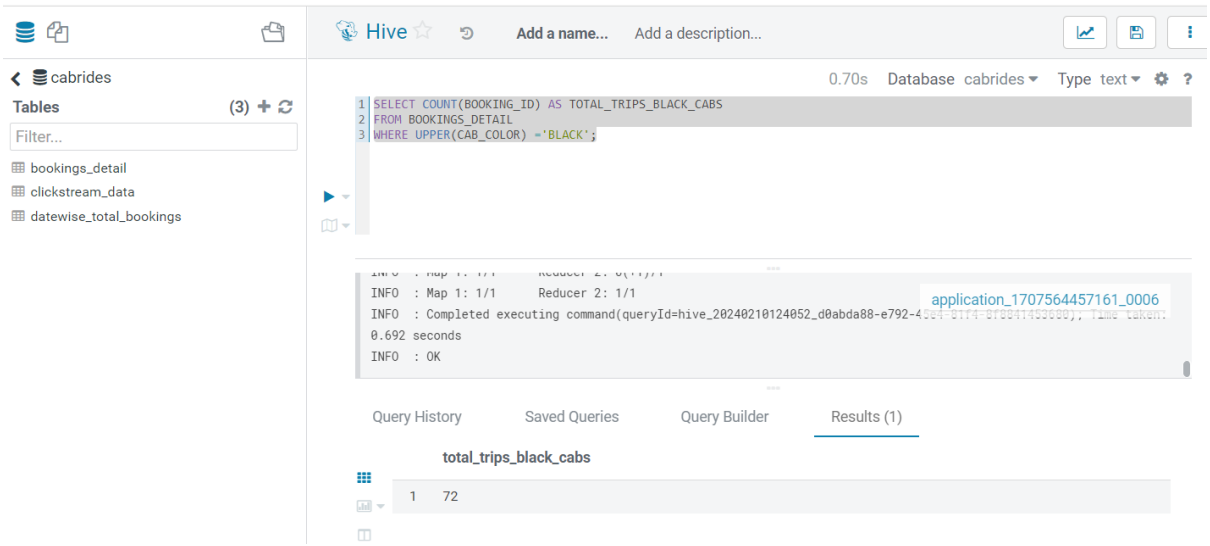

**VALIDATION:** close to Match (0.9852), since Kafka had extra 16 records compare to validation it should get the conversion ratio as 0.9688.

- **Task 8:** Calculate the count of all trips done on black cabs.

QUERY:

```
SELECT COUNT(BOOKING_ID) AS TOTAL_TRIPS_BLACK_CABS
FROM BOOKINGS_DETAIL
WHERE UPPER(CAB_COLOR) ='BLACK';
```

OUTPUT:




**VALIDATION:** Exact Match

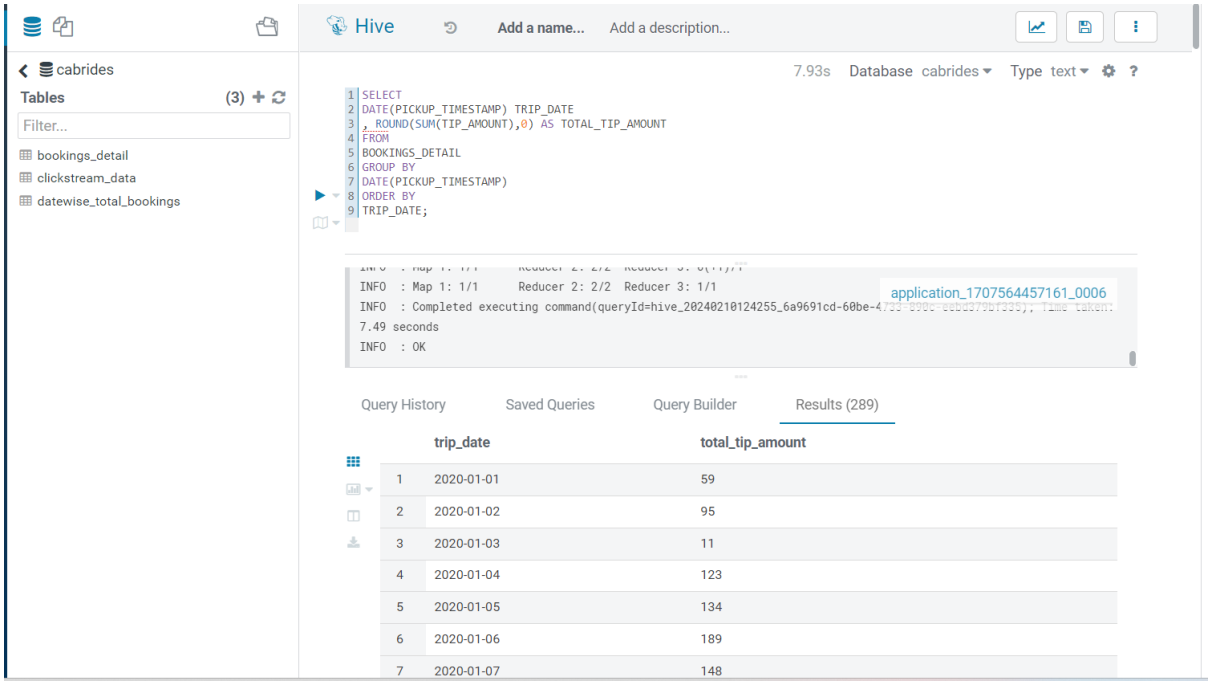
Count of all trips done on black cabs -72.

- **Task 9:** Calculate the total amount of tips given date wise to all drivers by customers.

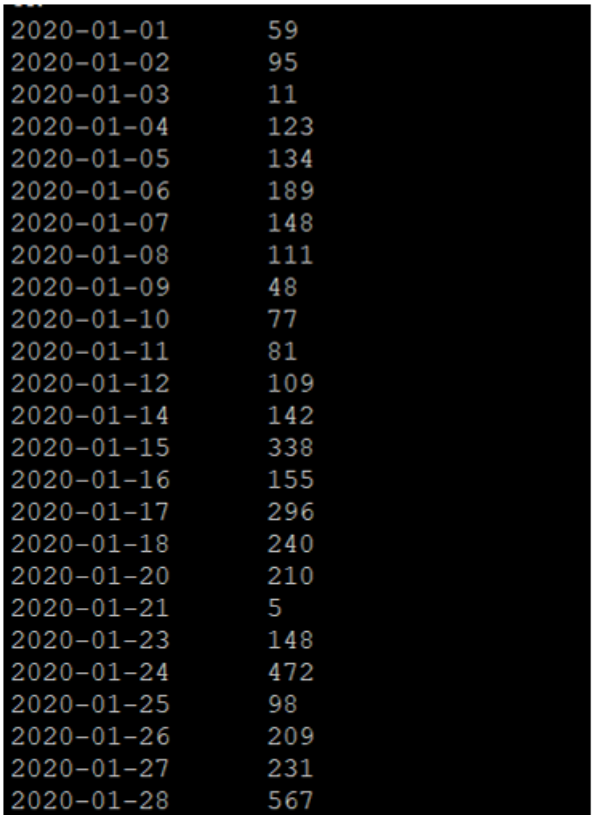
QUERY:

```
SELECT DATE(PICKUP_TIMESTAMP) TRIP_DATE
, ROUND(SUM(TIP_AMOUNT),0) AS TOTAL_TIP_AMOUNT
FROM BOOKINGS_DETAIL
GROUP BY DATE(PICKUP_TIMESTAMP)
ORDER BY TRIP_DATE;
```

OUTPUT:




VALIDATION: Exact Match



| | |
|---|---|
| 2020-01-01 | 59 |
| 2020-01-02 | 95 |
| 2020-01-03 | 11 |
| 2020-01-04 | 123 |
| 2020-01-05 | 134 |
| 2020-01-06 | 189 |
| 2020-01-07 | 148 |
| 2020-01-08 | 111 |
| 2020-01-09 | 48 |
| 2020-01-10 | 77 |
| 2020-01-11 | 81 |
| 2020-01-12 | 109 |
| 2020-01-14 | 142 |
| 2020-01-15 | 338 |
| 2020-01-16 | 155 |
| 2020-01-17 | 296 |
| 2020-01-18 | 240 |
| 2020-01-20 | 210 |
| 2020-01-21 | 5 |
| 2020-01-23 | 148 |
| 2020-01-24 | 472 |
| 2020-01-25 | 98 |
| 2020-01-26 | 209 |
| 2020-01-27 | 231 |
| 2020-01-28 | 567 |

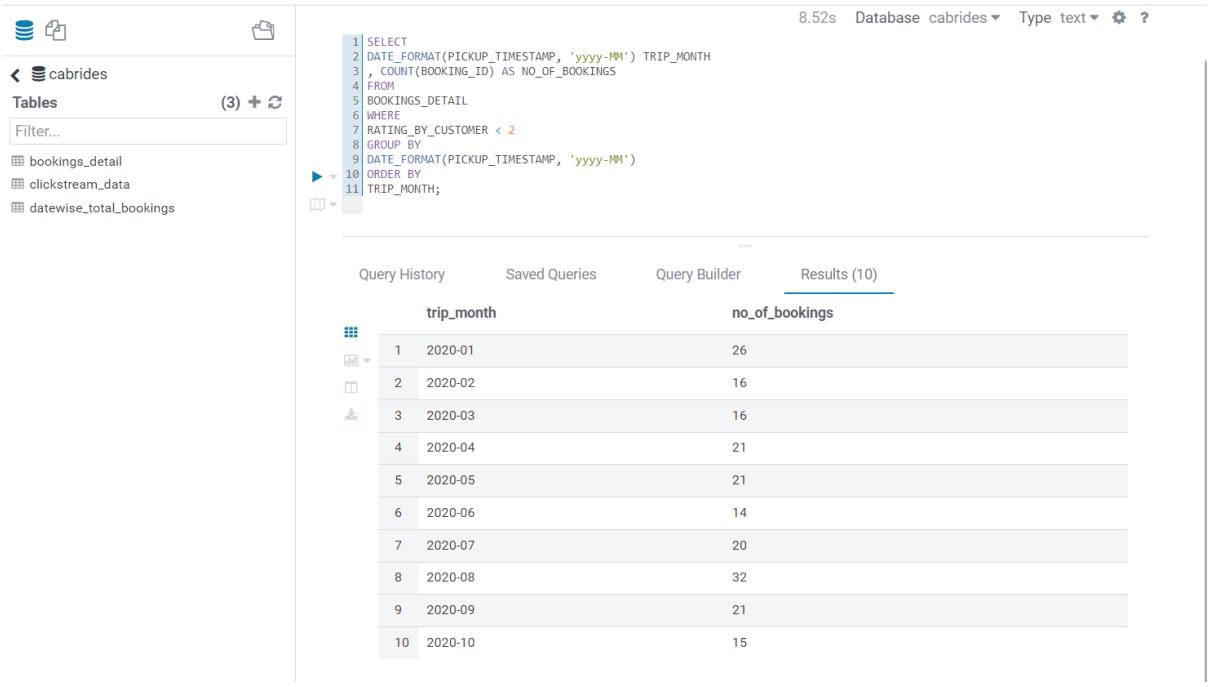
- **Task 10**:

Calculate the total count of all the bookings with ratings lower than 2 as given by customers in a particular month.

QUERY:

```
SELECT DATE_FORMAT(PICKUP_TIMESTAMP, 'yyyy-MM') TRIP_MONTH
, COUNT(BOOKING_ID) AS NO_OF_BOOKINGS
FROM BOOKINGS_DETAIL
WHERE RATING_BY_CUSTOMER < 2
GROUP BY DATE_FORMAT(PICKUP_TIMESTAMP, 'yyyy-MM')
ORDER BY TRIP_MONTH;
```

**OUTPUT:**




| | trip_month | no_of_bookings |
|---|---|---|
| 1 | 2020-01 | 26 |
| 2 | 2020-02 | 16 |
| 3 | 2020-03 | 16 |
| 4 | 2020-04 | 21 |
| 5 | 2020-05 | 21 |
| 6 | 2020-06 | 14 |
| 7 | 2020-07 | 20 |
| 8 | 2020-08 | 32 |
| 9 | 2020-09 | 21 |
| 10 | 2020-10 | 15 |

**VALIDATION:** Exact Match

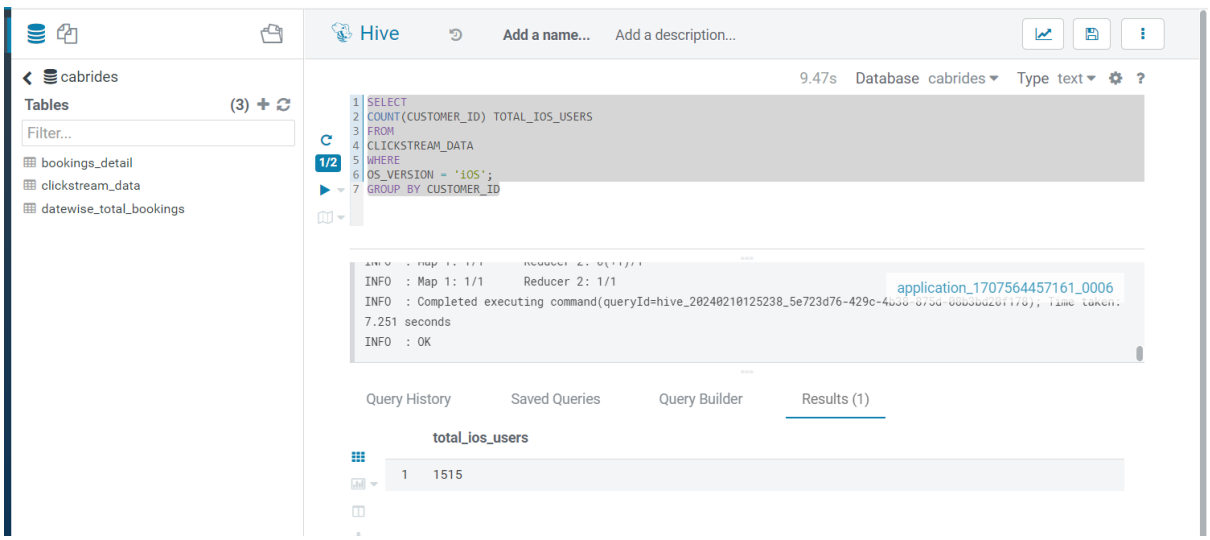
```
Total MapReduce CPU Time Spent: 7 seconds 970 msec
OK
2020-01 26
2020-02 16
2020-03 16
2020-04 21
2020-05 21
2020-06 14
2020-07 20
2020-08 32
2020-09 21
2020-10 15
```

- **Task 11**: Calculate the count of total iOS users.

**QUERY:**

```
SELECT COUNT(CUSTOMER_ID) TOTAL_IOS_USERS
FROM CLICKSTREAM_DATA
WHERE  OS_VERSION = 'iOS';
GROUP BY CUSTOMER_ID;
```

**OUTPUT:**




**VALIDATION:** close to Match(1515) , since Kafka had extra 16 records compare to validation You should get the count of all iOS users as 1503.