### live

# Let's Review Together 😂

21 October 2023

Bootcamp Data Analyst with SQL and Python using Google Platform



# Fundamental SQL Menggunakan Google Big Query

- **DDL**: Create, Drop
- Query Select and combination



- **DML**: Insert, Update, Delete
- **Query Date dan Subquery**
- **Query Join**





# Data : Employee

+	+	+	+
employee_id	first_name	last_name	hire_date
+	+	+	+
100	Steven	King	1987–06–17
101	Neena	Kochhar	1989–09–21
102	Lex	De Haan	1993-01-13
103	Alexander	Hunold	1990-01-03
104	Bruce	Ernst	1991–05–21
105	David	Austin	1997–06–25
106	Valli	Pataballa	1998-02-05
107	Diana	Lorentz	1999–02–07
108	Nancy	Greenberg	1994–08–17
109	Daniel	Faviet	1994–08–16
110	John	Chen	1997–09–28

+	-+	-+	tt
first_name	last_name	salary	salary * 1.05
+	-+	-+	ł+
Steven	King	24000.00	25200.0000
Neena	Kochhar	17000.00	17850.0000
Lex	De Haan	17000.00	17850.0000
Alexander	Hunold	9000.00	9450.0000
Bruce	Ernst	6000.00	6300.0000
David	Austin	4800.00	5040.0000
Valli	Pataballa	4800.00	5040.0000
Diana	Lorentz	4200.00	4410.0000
Nancy	Greenberg	12000.00	12600.0000





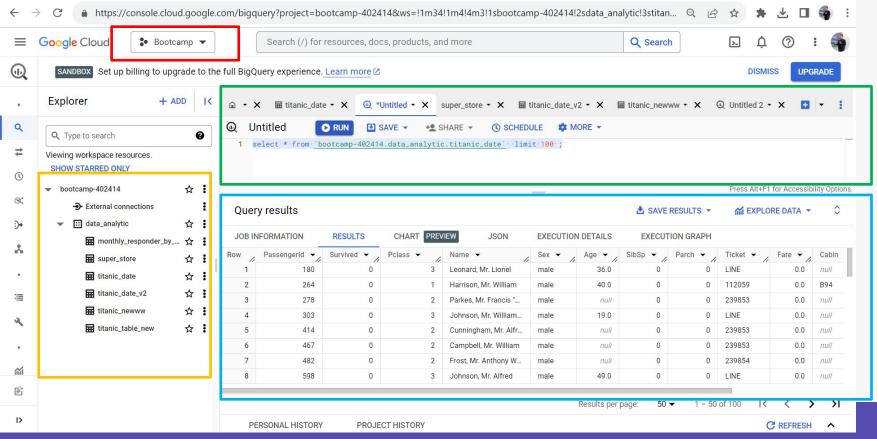
### **Data: Titanic**

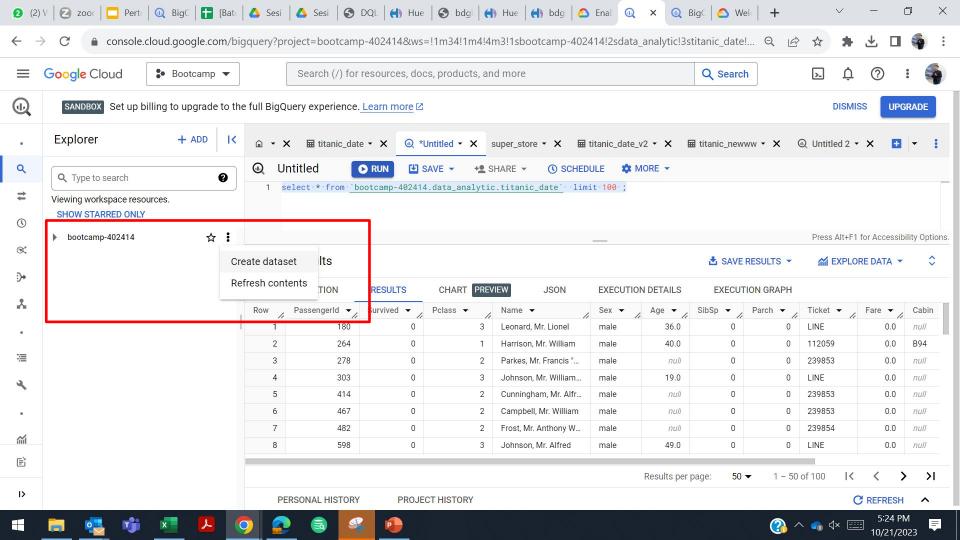
JOB IN	IFORMATION	RESULTS	CHART PREV	JSON JSON	EXECUTION	DETAILS	EXECUT	ION GRAPH			
Row /	Passengerld •	Survived ▼	Pclass ▼	Name ▼	Sex ▼	Age ▼ //	SibSp ▼	Parch ▼ //	Ticket ▼ //	Fare ▼ //	Cabin
1	180	0	3	Leonard, Mr. Lionel	male	36.0	0	0	LINE	0.0	null
2	264	0	1	Harrison, Mr. William	male	40.0	0	0	112059	0.0	B94
3	278	0	2	Parkes, Mr. Francis "	male	null	0	0	239853	0.0	null
4	303	0	3	Johnson, Mr. William	male	19.0	0	0	LINE	0.0	null
5	414	0	2	Cunningham, Mr. Alfr	male	null	0	0	239853	0.0	null
6	467	0	2	Campbell, Mr. William	male	null	0	0	239853	0.0	null
7	482	0	2	Frost, Mr. Anthony W	male	null	0	0	239854	0.0	null
8	598	0	3	Johnson, Mr. Alfred	male	49.0	0	0	LINE	0.0	null

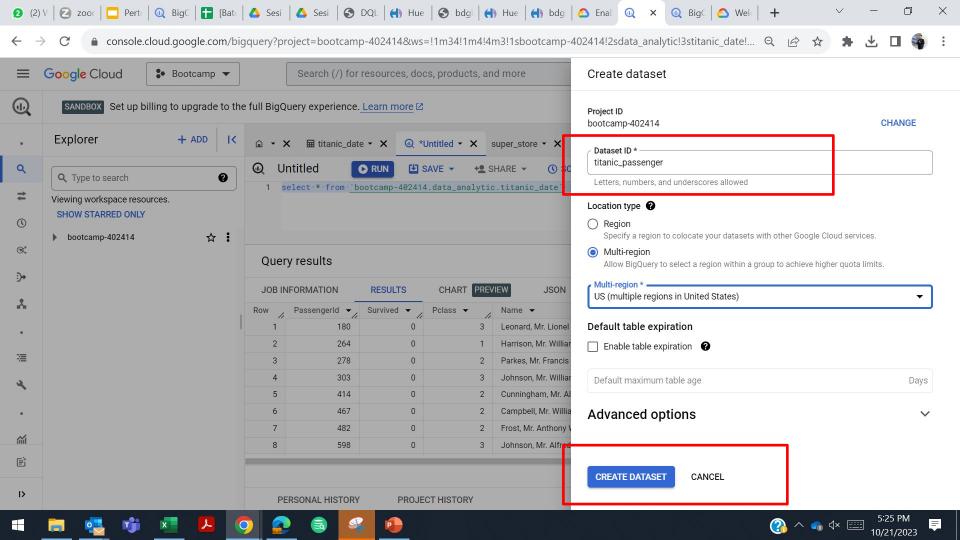


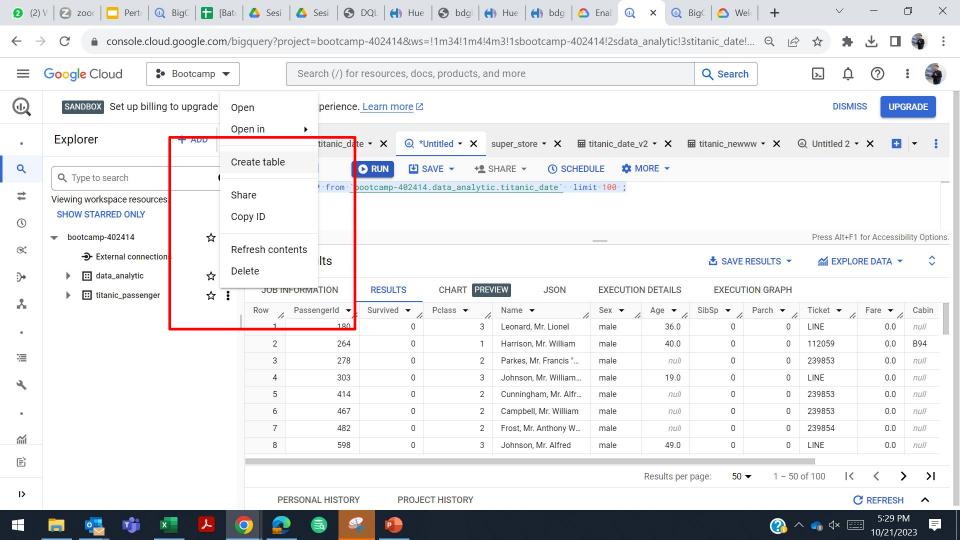


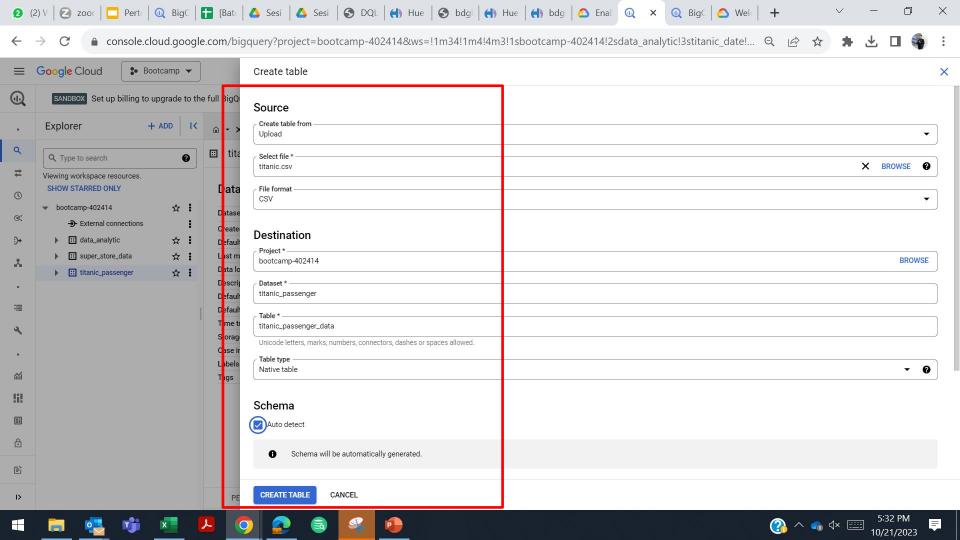
# **User Interface - BigQuery**







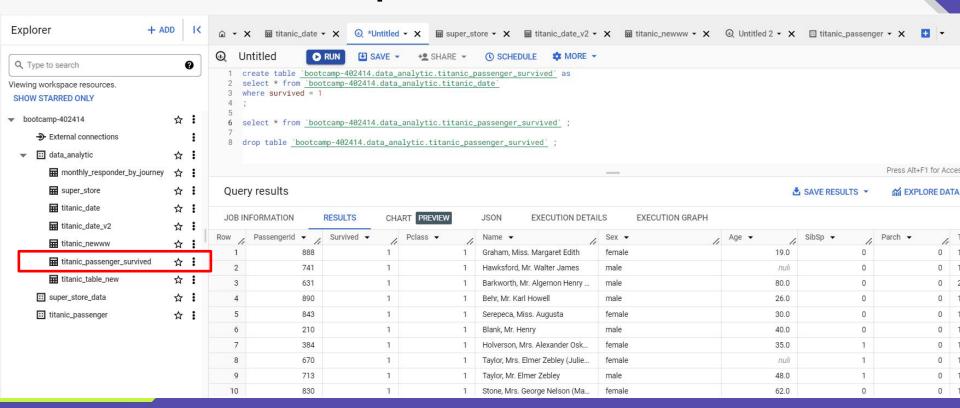








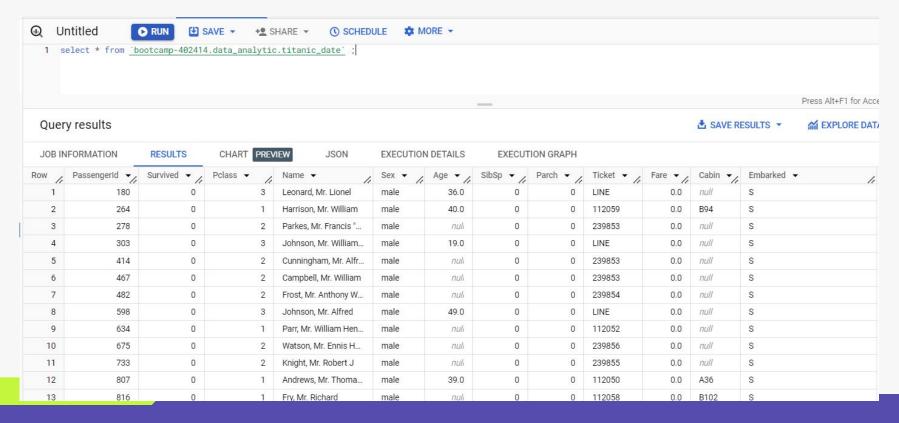
#### **DDL – Create and Drop Table**







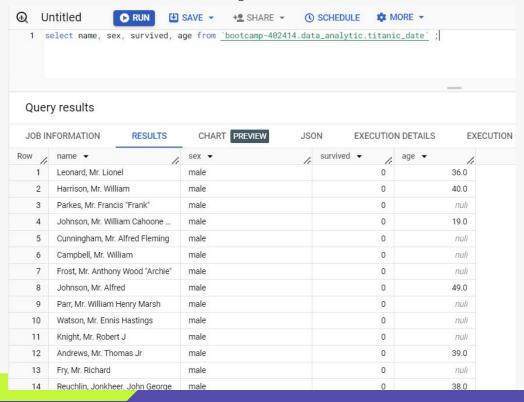
#### DDL - Select all columns







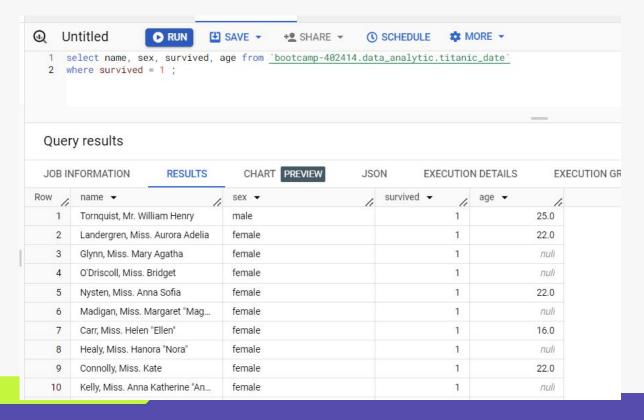
## **DDL – Select spesific columns**







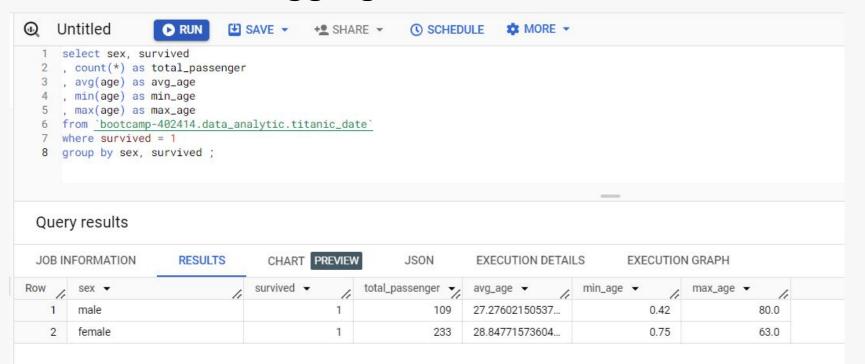
#### DDL – Select + Where







### DDL – Select + Aggregation + Combination



### live

# Konsep dasar SQL: DML

21 October 2023

Sesi 2-Bootcamp Data Analyst with SQL and Python using Google Platform



# DML Data Manipulation Language



# Memahami perintah DML

Data Manipulation Language (DML) adalah perintah SQL untuk manipulasi data dalam table

Perintah DML antara lain

- INSERT -> menambah record di database
- UPDATE -> mengubah record di database
- DELETE -> menghapus record di database



#### **SQL INSERT statement**

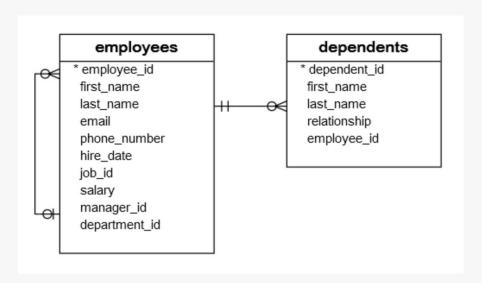
Untuk menyisipkan satu baris ke dalam sebuah tabel, Anda menggunakan sintaks berikut dari pernyataan INSERT.





#### **Contoh SQL INSERT statement**

Untuk menyisipkan baris baru ke tabel "dependents".



```
INSERT INTO dependents (
        first name,
        last name,
        relationship,
        employee_id
VALUES
                 'Dustin',
                 'Johnson',
                'Child',
                178
        );
```



# **SQL Multiple INSERT statement**

Untuk menyisipkan banyak baris menggunakan satu pernyataan INSERT, Anda menggunakan konstruk berikut:



# **Contoh SQL Multiple INSERT statement**

Misalnya, untuk menyisipkan dua baris ke tabel tanggungan, Anda menggunakan query berikut.

```
INSERT INTO dependents (
        first_name,
        last name,
        relationship,
        employee_id
VALUES
                 'Cameron',
                 'Bell',
                 'Child',
                 'Michelle',
                 'Bell',
                 'Child',
        );
```



## **SQL INSERT dari select statement**

Kita dapat menggunakan pernyataan INSERT untuk query data dari satu atau beberapa tabel dan menyisipkannya ke dalam tabel lain sebagai berikut:

```
INSERT INTO table1 (column1, column2)
SELECT
        column1,
        column2
FROM
        table2
WHERE
        condition1;
```



#### Contoh SQL INSERT dari select statement

Misalnya, Kita memiliki tabel bernama dependents\_archive yang memiliki struktur yang sama dengan tabel dependen. Pernyataan berikut menyalin semua baris dari tabel dependen ke tabel dependents\_archive.

```
INSERT INTO dependents_archive
SELECT
     *
FROM
    dependents;
```



#### **UPDATE statement**

Untuk mengubah data yang sudah ada dalam sebuah tabel, Anda menggunakan pernyataan UPDATE. Berikut adalah sintaks dari pernyataan UPDATE:

Pertama, tentukan tabel yang ingin Anda perbarui dalam klausa UPDATE.

Kedua, tentukan kolom-kolom yang ingin Anda ubah nilainya dalam klausa SET. Kolom-kolom yang tidak terdaftar dalam klausa SET akan mempertahankan nilai-nilai aslinya.

Ketiga, tentukan baris-baris yang ingin Anda perbarui dalam klausa WHERE.



#### **Contoh UPDATE statement**

Kita akan menggunakan tabel employee dan dependents untuk menunjukkan pernyataan UPDATE. Misalkan id karyawan 192 Sarah Bell mengubah nama belakangnya dari Bell menjadi Lopez dan Anda perlu memperbarui catatannya di tabel employee.



```
UPDATE employees
SET
    last_name = 'Lopez'
WHERE
    employee_id = 192;
```



# **DELETE Syntax**

Untuk menghapus satu atau lebih baris dari sebuah tabel, Anda menggunakan pernyataan DELETE. Sintaks umum dari pernyataan DELETE adalah sebagai berikut:

```
DELETE
FROM
table_name
WHERE
condition;
```

Pertama, berikan nama tabel di mana Anda ingin menghapus baris-baris.

Kedua, tentukan kondisi dalam klausa WHERE untuk mengidentifikasi baris-baris yang perlu dihapus. Jika Anda mengabaikan klausa WHERE, semua baris dalam tabel akan dihapus. Oleh karena itu, Anda harus selalu menggunakan pernyataan DELETE dengan hati-hati.



# **Contoh DELETE Syntax**

Kita akan menggunakan tabel karyawan dan tanggungan untuk mendemonstrasikan pernyataan DELETE.

Misalkan David, yang memiliki id karyawan 105, ingin menghapus Fred dari daftar dependents. Kita tahu bahwa Fred memiliki id dependen 16, jadi kita gunakan pernyataan DELETE berikut untuk menghapus Fred dari tabel dependents.

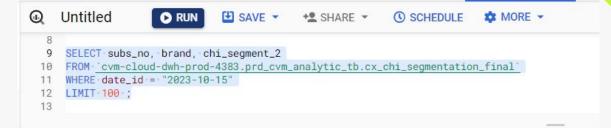
```
DELETE FROM dependents
WHERE

dependent_id = 16;
```



# Lets Go to Explore BigQuery





JOB IN	IFORMATION	RESULTS (	CHART	PREVIEW	JSON	E	XECUTION DETAILS
Row /	subs_no ▼	brand ▼	/ 0	hi_segment_2 🔻		1.	
1	2142307573	1	1 2	. Loyal Customer			
2	2140236547	1	1 3	. Happy New Cus	tomer		
3	2143045653	1	1 5	. Need Stimulatio	n		
4	2141019428	1	1 5	. Need Stimulatio	n		
5	2139489875	1	1 5	. Need Stimulatio	n		
6	2139300416	1	1 5	. Need Stimulatio	n		
7	2141133680	1	1 1	. Super Happy Cu	stomer		
8	2142871727	1	1 1	. Super Happy Cu	stomer		
9	2140877081	1	1 2	. Loyal Customer			
10	2139647263	1	1 5	. Need Stimulatio	n		
11	2139893845	1	1 5	. Need Stimulatio	n		
12	2139313588	1	1 3	. Happy New Cus	tomer		
13	2140441250		1 2	. Loyal Customer			
14	2139532911	1	1 1	. Super Happy Cu	stomer		
15	2140990717	1	1 5	. Need Stimulatio	n		





```
SELECT brand, chi_segment_2, count(*) as total_subs

FROM _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final

WHERE date_id = "2023-10-15"

group by 1,2 order by 1,2;
```

#### live

JOB IN	FORMATION	RESULTS CHART PREVIEW	JSON	EXECUTION DETAILS
Row /	brand ▼	chi_segment_2 ▼	total_subs ▼	
1	1	1. Super Happy Customer	5899936	
2	1	2. Loyal Customer	4533901	
3	1	3. Happy New Customer	1889054	
4	1	4. Cant Lose Them	688312	
5	1	5. Need Stimulation	6494431	
6	1	6. Potential Loyalist	1985416	
7	1	7. Recent Customer	1988022	
8	1	8. New Needing Attention	405907	
9	1	9. At Risk Customer	898545	
10	2	1. Super Happy Customer	7053093	
11	2	2. Loyal Customer	3209101	
12	2	3. Happy New Customer	908333	
13	2	4. Cant Lose Them	390000	
14	2	5. Need Stimulation	6406847	
15	2	6. Potential Loyalist	2086595	
16	2	7. Recent Customer	2152186	
17	2	8. New Needing Attention	204326	
18	2	9. At Risk Customer	1399392	

```
DΦL
```

```
ive
```

```
drop table if exists _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;
create table _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;
as
22    select subs_no, brand, chi_segment_2
from _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final ;
where date_id = "2023-10-15" and brand = 1 and chi_segment_2 = '1. Super Happy Customer'
limit 5
;
select * from _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;

29
select * from _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;
```

JOB IN	IFORMATION	RESULTS	CHA	RT PREVIEW	JSON	EXECUTION DETAILS	EXECUTION GRAPH
Row /	subs_no ▼ //	brand 🕶	1.	chi_segment_2 ▼	1.		
1	841044446		1	1. Super Happy Custon	ner		
2	840329346		1	1. Super Happy Custon	ner		
3	842005260		1	1. Super Happy Custon	ner		
4	841093326		1	1. Super Happy Custon	ner		
5	849551356		1	1. Super Happy Custon	ner		



JOB II	NFORMATION	RESULTS	СНА	RT PREVIEW	JSON	EXECUTION DETAILS	EXECUTI
Row /	subs_no ▼	brand ▼	1.	chi_segment_2 ▼	1.		
1	841044446		1	1. Super Happy Cust	tomer		
2	840329346		1	1. Super Happy Cust	tomer		
3	842005260		1	1. Super Happy Cust	tomer		
4	841093326		1.	1. Super Happy Cust	tomer		
5	849551356		1	1. Super Happy Cust	tomer		
6	2143911349		2	9. At Risk Customer			
7	2143785330		2	9. At Risk Customer	14		
8	2138971968		2	9. At Risk Customer			
9	2143525152		2	9. At Risk Customer	8		
10	2141634235		2	9. At Risk Customer			





```
delete from <a href="cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial">cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial</a>
where brand = 1;

select * from <a href="cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial">cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial</a>;

47
```

JOB IN	IFORMATION	9	RESULTS	CHA	RT PREVIEW	JSON	EXEC	UTION DETAILS	EXECUTION GRAP
Row /	subs_no ▼	1.	brand 🕶	1.	chi_segment_2 ▼	,	6		
1	214391134	9		2	9. At Risk Customer				
2	214378533	0		2	9. At Risk Customer				
3	213897196	8		2	9. At Risk Customer				
4	214352515	2		2	9. At Risk Customer				
5	214163423	5		2	9. At Risk Customer				

```
DΦL
```

```
54
   ----- Insert into manually
56
    insert into 'cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial'
58
    values
59
    (111111111,1,'1. Super Happy Customer'),
60
   (222222222,2,'2. Loyal Customer'),
    (333333333,2,'1. Super Happy Customer'),
61
    (44444444,2,'9. At Risk Customer'),
63
    (555555555,1,'9. At Risk Customer')
64
65
66
    select * from `cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial` ;
67
```

JOB IN	IFORMATION	RESULTS	CHA	RT PREVIEW	JSON	EXECUTION DETAILS	EXECUTION GRAPH
Row /	subs_no ▼	brand •	1	chi_segment_2 ▼	1.		
1	22222222		2	2. Loyal Customer			
2	444444444		2	9. At Risk Custome	er		
3	55555555		1	9. At Risk Custome	er		
4	111111111		1	1. Super Happy Cu	stomer		
5	333333333		2	1. Super Happy Cu	stomer		



#### DΦLab



```
------- Query Update

oupdate _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial  

rest

chi_segment_2 = '3. Happy New Customer'

swhere

subs_no = 2222222222

si ;

select * from _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;

select * from _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;

select * from _cvm-cloud-dwh-prod-4383.prd_cvm_analytic_tb.cx_chi_segmentation_final_trial ;
```

JOB IN	FORMATION	RESULTS CH	ART PREVIEW	JSON	EXECUTION DETAILS	EXECUTIO
Row /	subs_no ▼	brand ▼	chi_segment_2 ▼	1.		
1	22222222	2	3. Happy New Custome	r		
2	55555555	1	9. At Risk Customer			
3	111111111	1	1. Super Happy Custom	er		
4	333333333	2	1. Super Happy Custom	er		
5	44444444	2	9. At Risk Customer			