

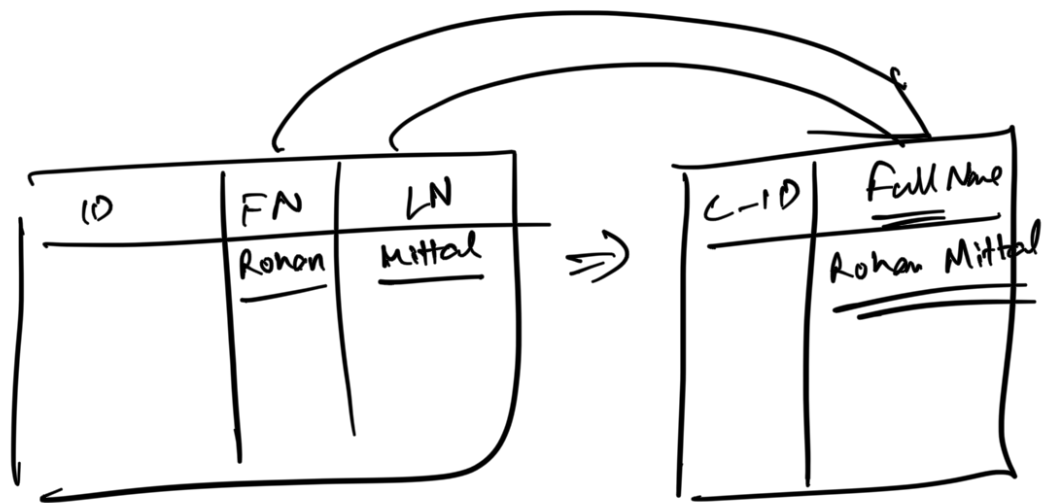
## SQL-02 - Filtering & Subqueries

- 1. WHERE clause
- 2. Compound condition
- 3. IN, BETWEEN, EXISTS, IF
- 4. Subqueries
- 5. CASE & WHEN stmts. ✓

ROUND()

string

Q. F1



"Rohan"      "Mittal" ⇒ "Rohan\_Mittal"

⇒ CONCAT ( FN, " ", LN )

⇒ CONCAT ( —, —, —, —, — )

ROHAN    Mittal  
                  ↑

→ UPPER() / LOWER()

Q. Extract all the product names that are  
part of product\_category\_id 1. {filter}

Syntax:

SELECT  
FROM  
WHERE

GENDER

'M'

SELECT \*  
FROM product  
→ WHERE

PC.ID	
① T	
1 T	

product\_category\_id = 1

Multiple conditions → compound conditions

Boolean Algebra

AND

OR

AND		
①	②	
T	T	→ T
T	F	→ F
F	T	→ F
F	F	→ F

①	②	
T	T	→ T
T	F	→ T
F	T	→ F
F	F	→ F

$\begin{matrix} T & T & \rightarrow & T \\ F & F & \rightarrow & F \end{matrix}$

$\begin{matrix} T & T & \rightarrow & T \\ F & F & \rightarrow & \textcircled{F} \end{matrix}$

Q. Get all the product info for products  
 with id between 3 and 8 (inclusive)  
 and of product with id 10

WHERE

product\_id  $\geq 3$

AND

product\_id  $\leq 8$  OR

product\_id = 10

$\left[ \begin{matrix} \textcircled{3} \\ \textcircled{8} \end{matrix} \right] \textcircled{3}$   
 $- \textcircled{10}$

WHERE

$\begin{matrix} T & \text{OR} & T \\ \textcircled{id = 10} & \text{OR} & \textcircled{product\_id \geq 3} \end{matrix}$  AND  $\textcircled{product\_id < 8}$

(T) AND (F)

✓

P_ID			
$\textcircled{10}$			

$\leftarrow \textcircled{10} \times$

$\textcircled{F}$

Q.

V\_ID = 3

What birth numbers were assigned to  
 V\_ID = 3 on & before 2019-04-20

Q.

V-ID = 7

'2019-04-03' | '2019-05-16'

---

non  $\geq$  AND  $\leq$

---

BETWEEN " " and " "

---

Q.

Return a list of customers with selected last name

Diaz, Edwards, Wilson  
↑                    ↑                    ↑  
③                    OR                    OR

WHERE

customer-last-name IN ('Diaz', 'Edwards', 'Wilson')

---

Q.

You want to get data about a customer you knew as 'Jerry', but you aren't sure

'Jerry'  
'Jeremy'  
'Jeremiah'

search using  
Partial string jer

⇒ LIKE → Wildcard characters

1 - %

2. \_ (underscore)

% → stand-in for any number of characters including (none).

\_ → stand-in for only one character.

customer name LIKE "a%" → starts with a

"%a" → Ends with

"a\_b%" → One char b/w a & b and then there could be more chars

a \_ \_ b → 2 chars.

Q Find all the products without any size value.  
 Missing values IS NULL

SELECT \*  
FROM product  
WHERE size IS NULL;

product\_size  $\overset{\textcircled{x}}{\downarrow}$  = NULL

Q. Analyze all the purchases made at the mkt  
on days when it rained.

① Find out day when it rained.

② For these dates, get the purchase info.

Q. List down all the product details where  
product\_category contains 'fresh'.

① Product details

② fresh product category name

Q Find the details of all the customers who made a purchase on 2017-05-04.

EXISTS → ( check whether country is present or not )

IN → ( )

SELECT \* FROM customer  
~~WHERE~~ EXISTS ( SELECT \* FROM customer-purchases  
 T4  
 WHERE customer.customer-id = cp.customer-id  
 AND market\_date = )

EXISTS ( ) IN Alternative for COUNTRY

IN

WHERE ( ? )

IF \_ :

V-ID	Name	Type	V-fresh-type
		' '	→ fresh-pro
		—	→ other
		—	—
		—	—
		—	—
		—	—
		—	—
		—	—

## CASE & WHEN

Syntax:

SELECT

→ CASE  
 → WHEN  
 THEN  
 → WHEN  
 THEN  
 ELSE  
 END AS

Q. Bucketize Data (total amt)  
 Part the total cost to customer into



✓

bins of

- ✓ 1. "Under \$5.00" ←
- ✓ 2. 5 - 9.99 ←
- 3. 10 - 19.99 ←
- 4. 20 & over ←

6

CASE

MOD ( )

✓

