

04 - Summarizing Data

Monday, April 1, 2024 3:09 PM

Aggregate Functions

Functions are used to summarize data like

- MIN
- MAX
- COUNT
- SUM
- AVG

```
SELECT AVG(payment_total)
FROM invoices
```

GROUP BY | IMPORTANT !!!!!!!!!!!!!!!

id					
1					
3					
1					
1					
2					
3					

group by → id
لم يكمل
الجميع دول في
سكان واحد
واحد على
الجميع
Some-operations

1] =
2] =
3] =
3] =

GROUP BY EXAMPLE

```
SELECT p.date , pm.name , SUM(p.amount)
FROM payments p
JOIN payment_methods pm
ON p.payment_method = pm.payment_method_id
GROUP BY p.date,p.payment_method
ORDER BY p.date ASC
```

HAVING CLAUSE

What's problem that having try to solve ?

```
SELECT p.date , pm.name , SUM(p.amount)
FROM payments p
GROUP BY p.date
```



Say I asked you to filter that if sum less than X don't consider it how to do that ?

WHERE CLAUSE ?

```
SELECT p.date , pm.name , SUM(p.amount) AS sum
FROM payments p
WHERE sum >= X
GROUP BY p.date
```

The problem is that the grouped when [WHERE] turn to execute don't become computed yet so you will get an error !

HAVING IS HERE

```
SELECT p.date , pm.name , SUM(p.amount) AS 'sum'
FROM payments p
GROUP BY p.date
HAVING sum > X
```

HAVING :

You can Filter only with columns selected in the select statement

NOT THE COLUMN ALICE THE REAL NAME

VS

WHERE You can USE any

The ROLLUP

Super helpful operator that used to sum the aggregation function automatic

```
SELECT customer_id , SUM(points)
FROM customers
GROUP BY customer_id WITH ROLLUP
```

```
SELECT pm.name , SUM(p.amount)
FROM payments p
JOIN payment_methods pm
ON p.payment_method = pm.payment_method_id
```

GROUP BY pm.name WITH ROLLUP