

① Select → select Col

② From → select tab

③ Where → filter

④ Order by → Sorting

⑤ Limit → Fixed records

⑥ Group by → Grouping data

Display avg income by sender

Num

Cat

Group by

Unique category

Aggregation on numbers

Product	Num
A	4
B	2
C	3
A	1
A	2
B	1

Group by

Split

A	4
A	1
A	2

Combine

Pass

A	7
B	3
C	3

✓

C	3
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(#)

Select Gender , Avg(Income)

From Cardio

Group by Gender ;

Order by avg(income) asc

Limit 2 ;



Summarizing data

(Similar to pivot table)

⑦ Having → Filters grouped data

Dept	Salary
ACC	1000
IT	100
IT	1000
CS	2000
CS	3000
IT	1500

where
✓
✗
✓
✓
✓
✓

Dept	Salary
ACC	1000
IT	2500
CS	5000

Ans

where

Display dept by salary exclude salary below 1000, Also exclude group if total salary below 1500.

Having

Having

Note :

- 1) Where can be used for ungroup data (Table)
Having can be used for grouped data (Pivot-table)
- 2) Writing : Where → Group by → Having → Order by → limit - - -
- 3) Group by can group data based on discrete number or category.
- 4) Where and Having can also be used together.

Q: Display avg. income by education exclude education below 15 & and group below 80000?

Name	Age	Gender
A	18	M
B	24	F
C	34	M

T1

Name	Role	Salary
A	DA	1000
B	AI	2000
C	DA	4500

T2

Display records who are working as DA?

Select *

From T1

Where Name IN (Select Name

From T2

Where role = 'DA'); ✓

Rules

(T1)

Outer Query → Fetch data

Inner Query → Condition

(T1, T2)

Name	Age	Gender
A	18	M
C	34	M

Display records whose income is above average income ?

Name	Rok	Salary
A	DA	1200
B	DA	1000
C	DA	2000
D	AI	4000

T1

$$\text{avg} = 2100$$

Select *

From T1

Where Salary > (Select avg(Salary)

From T1)