

Applied SQL-3

Start @ 9:03

$$\text{Find} = \text{Salary} - (\text{tax} \times \text{Sal})$$

Company-id	employee-id	Salary	max salary	tax %.
1	1	13000	13000	49%
1	2	9000	13000	49%
1	3	5000	13000	49%
2	1	800	800	0%
2	2	500	800	0%

case .when
 $\text{max}(s) \text{ over}(\text{part by comp}) < 1000$
 then 0%

when
 $\text{max}(s) \text{ over}(\text{p. by comp}) \text{ between } 1000 \text{ \& } 10000$
 then 24%
 49%

account-id	day	type	amt	accumulative
1	Jan1	deposit	10	10
1	Jan2	deposit	20	30
		ind	5	25

1	Jan 3	Withdraw	18	18 → 18
2	Jan 4	Deposit	18	↓ 6
2	Jan 4	Withdraw	12	18 - 12 → 6

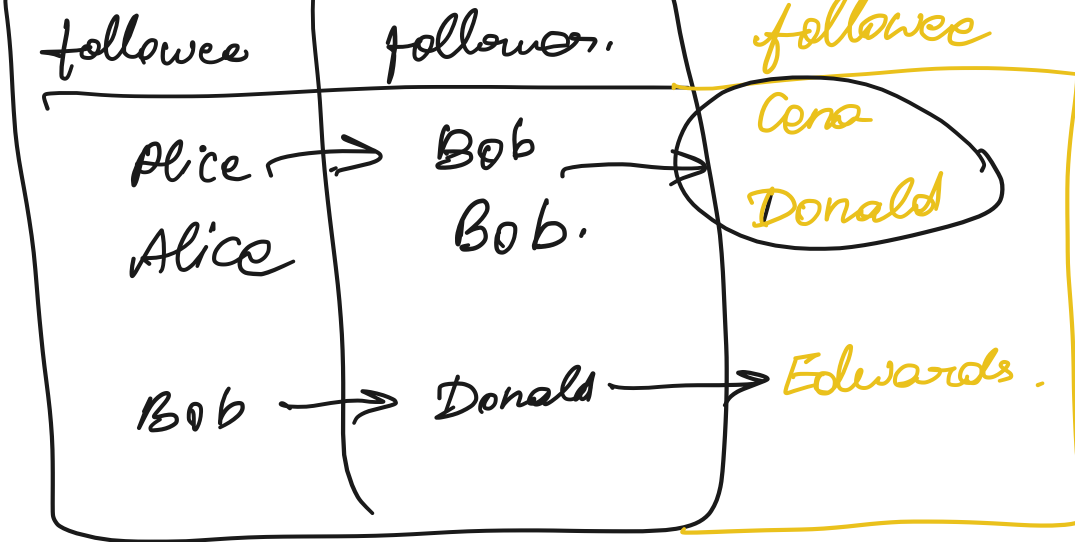
when type = deposit then amount
 else type = "withdraw" then -amount

	Amt	lead amount	Sum
Jan 1	10	Null	
Jan 2	20	10 →	30
Jan 3	-5	20 →	15
	18	Null →	null
	-12	18 →	6

Self join

followee	follower
Alice	Bob
Bob	Cena
Bob	Donald
Donald	Edward

followee	follower
Alice	Bob
Bob	Cena
Bob	Donald
Donald	Edward



follower, count(*)

group by follower

Order-id	Pr.id	quantity
1	1	12
1	2	10
1	3	15
2	1	8
2	4	4
2	5	6

Order-id	max(quantity)	Avg(quantity)	max()
1	15	12.33	12.33
		6	12.33

Diagram illustrating the result of a SQL query. The table shows the maximum and average quantity for each order. The value 15 is circled in yellow, and arrows indicate the calculation of the average (12.33) for order 1.

Answer: order.id 1. because 15 is greater than the max of the avg. order qty.

Given date = Dec 10th

↳ all hires 6th months before Dec 10th.

emp.id	Start date	Salary
Dept A	Sept 1	100
Dept A	Dec 10	150
Dept B	Jan 12.	200
Dept B	July 6.	180
Dept B + B	Aug 1	400

D. Rank. desc

emp.id	Start date	Salary	
Dept A	Sept 1	100	2
Dept A	Dec 10	150	1
Dept B	July 6.	180	2
Dept B	Aug 1	400	1

↙

	max(sal)
dept A	150

dept B	400
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$\overline{=}$?
 ↓
 Compare only 1 value

IN ?
 ↓
 Can compare multiple values

Recent 2 orders.

Rank date in desc

get all < 2

Cus-id	Cus-name	date	
A	'	Jan 1	4
A	'	Jan 2	3
A	'	Jan 3	2
A	'	Jan 10	1
B	'	Jan 20	2
B	'	Jan 25	1
C	'	Jan 18	3
C	'	Feb 1	2
C	'	Feb 14	1

watch = 8 i/o = 10 iPad = 12 Mac = 15

Brand	Product	Price	2 nd expensive	4 th expensive
	iphone	10	iphone	Mac

Apple	iphone	12	iphone	Mac
Apple	ipod	8	iphone	Mac
Apple	Watch	15	iphone	Mac
Apple	Mac			
Sam	Watch	35	laptop	Null
Sam	phone	4	laptop	Null
Sam	laptop	20	laptop	Null

nthvalue(product, 2) over (

order by id

id	visit date	people.	lag(2)	lag(1)	lead(1)	lead(2)
1	Jan 8	100	Null	Null	400	300
1	Jan 9	400	Null	100	300	250
1	Jan 10	300	100	400	250	800
1	Jan 11	250	400	300	800	Null
1	Jan 12	800	300	250	Null	Null

(people > 100 & lag(1) > 100 & lag(2) > 100)

or

(people > 100 & lag(1) > 100 & lead(1) > 100)

Q7

$(people > 100 \ \& \ lead(1) > 100 \ \& \ lead(2) > 100)$