

SQL Class 4

Products

cursor

Product	Price
A	0.5
B	1.5
C	0.2

Subquery

(1-1), (1-4)

Window Functions

Sales

Shop	Date	Amount
1	1-Jan	100
2	1-Jan	2000
1	1-Jan	300
1	2-Jan	250
3	2-Jan	80

↓ output

Shop	Total
1	650
2	200
3	80

Q.) Give us total sale for each shop

A.) select
shop,
sum(amount) as total
From
Sales

Group by shop;

Sales (Before)

Country	date	amount
IN	1-Jan	100
USA	1-Jan	200
IN	2-Jan	300
IN	3-Jan	200
USA	3-Jan	100
IN	4-Jan	50

Intermediate

Country	date	amount
IN	4-Jan	50
IN	3-Jan	200
IN	2-Jan	300
IN	1-Jan	100
USA	3-Jan	100
USA	1-Jan	200

window function

Select
*,

Sum(amount) over (Partition By
Country
Order By
date desc)
As totalSale

From

Sales;

W1

W2

Country	date	amount	total
IN	4-Jan	50	650
IN	3-Jan	200	650
IN	2-Jan	300	650
IN	1-Jan	100	650
USA	3-Jan	100	300
USA	1-Jan	200	300

Lead & Lag Window Functions

Sales

Shop	Date	Amount
S1	1-Jan	100
S1	2-Jan	120
S1	3-Jan	150
S1	4-Jan	180
S1	5-Jan	200
S1	6-Jan	100

Lag (amount, 1)

over (current)
↓ ad Prev_Amount

Shop	Date	Amount	Prev_Amount
S1	1-Jan	100	null → 0
S1	2-Jan	120	100
S1	3-Jan	150	120
S1	4-Jan	180	150
S1	5-Jan	200	180
S1	6-Jan	100	200

Recursion

$n=5$, write a python program
to calculate the factorial of
a number?

$$n! = 1$$

{ for i in range(1, n+1):

$$n! \times = i$$

print(i)

$$n! = n \times (n-1) \times (n-2) \times \dots \times 1$$

$$\begin{aligned} 5! &= 5 \times 4 \times 3 \times 2 \times 1 \\ &= 120 \end{aligned}$$

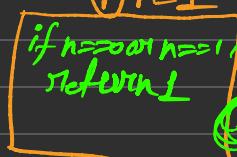
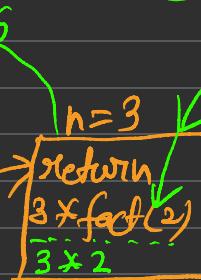
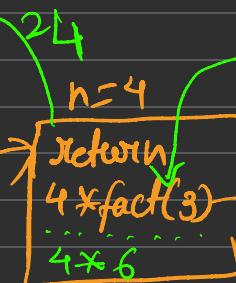
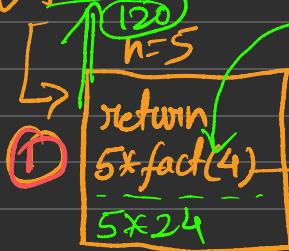
Recursive approach

def factorial(n):

if n==0 or n==1:
return 1

return n * factorial(n-1)

(factorial(5))



With Cte-count

as

Select 1 as number

Union All

Select number+1

from Cte-Counts

where number < 10

50 < 50 X

1

2

3

4

50

Select 1 as number

Union All

Select 2 as number

Union All

Select 3 as number

Select 50 as number

