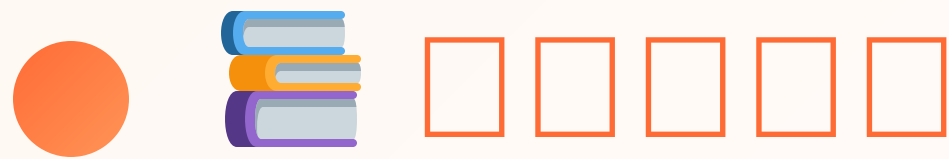


5 - COUNT, SUM, AVG





1.

1

COUNT

SUM

AVG

MAX MIN

2. □□□□

```
-- □□□□□□  
SELECT COUNT(*) FROM 'data/sales.csv';  
  
-- □□□□□  
SELECT SUM(quantity) FROM 'data/sales.csv';  
  
-- □□□□□  
SELECT AVG(price) FROM 'data/products.csv';
```

3. 집계함수

COUNT(*) 모든행의 수를 반환한다. NULL도 포함한다.

COUNT(컬럼명) 컬럼에 NULL이 아닌 값의 수를 반환한다.

SUM : 숫자 컬럼의 합계를 반환한다.

AVG : 숫자 컬럼의 평균을 반환한다.

4. □□□□□

□□□□□□□□□□□□

□□□□□□□□□□□□□□□□

□□□□□□□□□□□□



1 sales.csv

```
SELECT COUNT(*) FROM 'data/sales.csv';
```

15

□ □ □ □ □ □ □ □ □ □ □ □ □ □

```
-- C001□□□□□□□□  
SELECT COUNT(*) FROM 'data/sales.csv'  
WHERE customer_id = 'C001';
```


2

```
SELECT SUM(quantity) FROM 'data/sales.csv';
```

1 ÷

□□3□□□□□□□□□□□□

```
SELECT AVG(price) FROM 'data/products.csv';
```

□ □ □ □ □ □

```
-- □□□□□□□□□□□□□□□□  
SELECT  
    MAX(price) AS □□□□,  
    MIN(price) AS □□□□,  
    AVG(price) AS □□□□  
FROM 'data/products.csv';
```



1. □□□□□□□□□□

```
SELECT
  COUNT(*) AS □□□□,
  SUM(quantity) AS □□□□,
  AVG(quantity) AS □□□□□,
  MAX(quantity) AS □□□□□,
  MIN(quantity) AS □□□□□
FROM 'data/sales.csv';
```

2. □□□□□□

```
-- 10□□□□□□□□□□  
SELECT  
    COUNT(*) AS □□□□□□,  
    SUM(quantity) AS □□□□□□,  
    AVG(quantity) AS □□□□□□  
FROM 'data/sales.csv'  
WHERE quantity >= 10;
```

3. □□□□□□□□

```
-- □□□□□□□□□□□□□□□□10,000□□□□□  
SELECT  
    SUM(quantity) AS □□□□,  
    SUM(quantity) * 10000 AS □□□□□□  
FROM 'data/sales.csv';
```



□□□1□□□□□

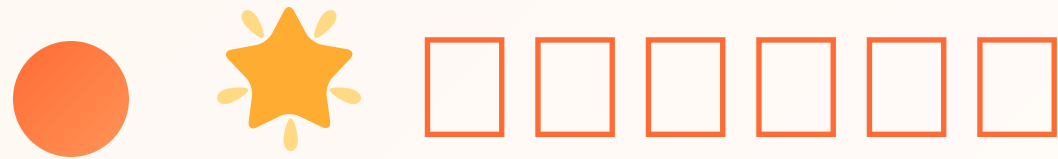
```
-- □□□□□□□□□□  
SELECT  
    COUNT(*) AS □□□,  
    AVG(price) AS □□□□,  
    SUM(price) AS □□□□□□□□  
FROM 'data/products.csv'  
WHERE category = '□□□□';
```

□□□2□□□□□

```
-- □□□□□□□□□□  
SELECT  
    COUNT(*) AS □□□□,  
    SUM(quantity) AS □□□□  
FROM 'data/sales.csv'  
WHERE order_date >= '2024-01-20';
```


□□□3□□□□□

```
-- □□□□□□□□□□□□□□□□  
SELECT COUNT(DISTINCT customer_id) AS □□□□□□□  
FROM 'data/sales.csv';
```



1.

```
SELECT COUNT(*) AS FROM 'data/sales.csv';
```

2.

```
SELECT COUNT(*) AS  
FROM 'data/sales.csv'  
WHERE customer_id = 'C001';
```

3. □□□□□

```
-- C001□□□□□□  
SELECT  
    COUNT(CASE WHEN customer_id = 'C001' THEN 1 END) AS C001□□□□□,  
    COUNT(*) AS □□□□□,  
    ROUND(COUNT(CASE WHEN customer_id = 'C001' THEN 1 END) * 100.0 / COUNT(*), 2) AS □□□□  
FROM 'data/sales.csv';
```



□□	□□	□
COUNT(*)	□□□□□□□□	□□□□□□□□□□
COUNT(□)	NULL□□□□□□□□	□□□□□□□□
SUM	□□□	□□□□□□□□□□□□
AVG	□□□	□□□□□□□□□□□□□□
MAX	□□□	□□□□□□□□□□□□□□
MIN	□□□	□□□□□□□□□□□□□□



□□□□□□□ Tips

NULL□□□□

COUNT(*)□NULL□□□□

COUNT(□□)□NULL□□□

SUM□AVG□NULL□□□□□□□

0□□□□

```
-- □□□□□□0□□□□  
SELECT COUNT(*) FROM 'data/sales.csv'  
WHERE customer_id = 'C999'; -- □□□□□□□  
-- □□□0  
  
SELECT SUM(quantity) FROM 'data/sales.csv'  
WHERE customer_id = 'C999';  
-- □□□NULL□0□□□□□□
```



COUNT (*)



SUM()



AVG()



MAX MIN



WHERE



```
-- □□□□□□□□
```

```
SELECT
```

```
    COUNT(*) AS □□,
```

```
    SUM(□□□) AS □□,
```

```
    AVG(□□□) AS □□,
```

```
    MAX(□□□) AS □□,
```

```
    MIN(□□□) AS □□
```

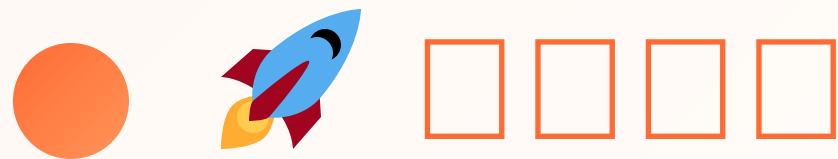
```
FROM □□□□;
```

```
-- □□□□□□
```

```
SELECT □□□□
```

```
FROM □□□□
```

```
WHERE □□;
```

6 GROUP BY
[Empty boxes for text input]



1

```
-- 1. products.csv
-- 
-- 2. sales.csv
-- 
-- 3. customers.csv
```

2

WHERE

```
-- 1. 
SELECT
    COUNT(*) AS ,
    AVG(____) AS 
FROM 'data/products.csv'
WHERE ____ = '____';

-- 2. 2024125
-- 

-- 3. C002
-- 
```

□□3□□□□□□□□□□□□□□

□□□□□□□□□□□□□□□□

```
-- products.csv□□□□□□□□□□
SELECT
  ____ AS □□□□,
  ____ AS □□□□,
  ____ AS □□□□,
  ____ AS □□□□,
  ____ AS □□□□
FROM 'data/products.csv';
```

4

```
-- 1. 
-- 2024120
-- - 
-- - DISTINCT
-- - 
-- 

-- 2. 
-- 
-- 
```



```
-- sales.csv□□□□□□□□□□□□□□  
-- 1. □□□□□□□□□□□□□□□□1□□  
-- 2. □□□□□□□□□□□□□□  
-- □□□□□□□□□□□□□□□□2□□□□□□□□
```



□ □ □ □ □ □ □ □ □ □ □ □ □ □

```
-- □□□□□□□□□□□□□□
-- 1. □□□□□□□1□15□□1□20□□
--     - □□□□□□□□□□
--     - □□□□□□□□□□
--     - 1□□□□□□□□□□□□

-- 2. □□□□□□□□□□□□□C001□
--     - □□□□□□
--     - □□□□□□
--     - 1□□□□□□□□□□□□
```



□□□□□□

□□□□□□□□□□□□□□□□

```
-- □□□1□□□□□□□□□□  
SELECT customer_id, COUNT(*)  
FROM 'data/sales.csv';  
  
-- □□□2□□□□□SUM□□□  
SELECT SUM(customer_name)  
FROM 'data/customers.csv';  
  
-- □□□3□□□□□□WHERE□□□□□□□□  
SELECT COUNT(*)  
FROM 'data/sales.csv'  
WHERE COUNT(*) > 5;
```




□□□NULL□□□□

```
-- NULL□□□□□□□□□□□□□□
-- 1. COUNT(*)□COUNT(□□)□□□
SELECT
    COUNT(*) AS □□□,
    COUNT(customer_id) AS □□ID□,
    COUNT(DISTINCT customer_id) AS □□□□□□□
FROM 'data/sales.csv';

-- 2. NULL□0□□□□□□□COALESCE□□□
-- □□NULL□□□□□□□□□□□□
SELECT
    SUM(COALESCE(quantity, 0)) AS □□□□
FROM 'data/sales.csv';
```


● ? FAQ

Q: COUNT(1)和COUNT(*)的区别

A: COUNT(1)和COUNT(*)的区别

Q: 四舍五入

A: ROUND和TRUNC的区别 ROUND(AVG(price), 2) 四舍五入保留2位

Q: 统计行数

A: COUNT和ROWNUM的区别