

product_id	product_name	category	price	rating	stock	brand	sold_quantity
1	Echo Dot	Electronics	3499	4.6	120	Amazon	500
2	Kindle Paperwhite	Electronics	9999	4.8	80	Amazon	300
3	Fire TV Stick	Electronics	3999	4.5	50	Amazon	450
4	Instant Pot Duo	Kitchen	7999	4.7	30	InstantPot	200
5	Air Fryer	Kitchen	5999	4.6	40	Philips	150
6	Samsung Galaxy S23	Mobiles	69999	4.8	25	Samsung	100
7	OnePlus 11	Mobiles	49999	4.7	20	OnePlus	90
8	Bose Headphones	Electronics	19999	4.5	15	Bose	80
9	Logitech Mouse	Electronics	1299	4.4	200	Logitech	600
10	Amazon Basics Bag	Accessories	999	4.3	300	Amazon	400

```
CREATE TABLE products (
    product_id INT PRIMARY KEY,
    product_name VARCHAR(50),
    category VARCHAR(30),
    price INT,
    rating DECIMAL(2,1),
    stock INT,
    brand VARCHAR(30),
    sold_quantity INT
);
```

```
INSERT INTO products (product_id, product_name, category, price, rating, stock, brand, sold_quantity)
VALUES
(1, 'Echo Dot', 'Electronics', 3499, 4.6, 120, 'Amazon', 500),
(2, 'Kindle Paperwhite', 'Electronics', 9999, 4.8, 80, 'Amazon', 300),
(3, 'Fire TV Stick', 'Electronics', 3999, 4.5, 50, 'Amazon', 450),
```

(4, 'Instant Pot Duo', 'Kitchen', 7999, 4.7, 30, 'InstantPot', 200),  
 (5, 'Air Fryer', 'Kitchen', 5999, 4.6, 40, 'Philips', 150),  
 (6, 'Samsung Galaxy S23', 'Mobiles', 69999, 4.8, 25, 'Samsung', 100),  
 (7, 'OnePlus 11', 'Mobiles', 49999, 4.7, 20, 'OnePlus', 90),  
 (8, 'Bose Headphones', 'Electronics', 19999, 4.5, 15, 'Bose', 80),  
 (9, 'Logitech Mouse', 'Electronics', 1299, 4.4, 200, 'Logitech', 600),  
 (10, 'Amazon Basics Bag', 'Accessories', 999, 4.3, 300, 'Amazon', 400);

### Questions on GROUP BY

1. Find the total sold\_quantity of products for each category.

```
SELECT category,
SUM(sold_quantity) AS total_sold_quantity
FROM
products
GROUP BY category;
```

category	total_sold_quantity
Mobiles	190
Kitchen	350
Electronics	1930
Accessories	400

2. Find the average price of products for each brand.

```
SELECT brand,
AVG(price) AS avg_price
FROM products
GROUP BY brand;
```

brand	avg_price
Amazon	4624.0000
InstantPot	7999.0000
Philips	5999.0000
Samsung	69999.0000
OnePlus	49999.0000
Bose	19999.0000
Logitech	1299.0000

3. Count how many products are available in each category.

```
SELECT category,
COUNT(product_id) AS total_products
FROM products
GROUP BY category;
```

	category	total_products
▶	Electronics	5
	Kitchen	2
	Mobiles	2
	Accessories	1

4. Find the maximum rating of products for each category.

```
SELECT category,
MAX(rating) AS max_rating
FROM
products
GROUP BY category;
```

	category	max_rating
▶	Electronics	4.8
	Kitchen	4.7
	Mobiles	4.8
	Accessories	4.3

5. Find the minimum price of products for each brand.

```
SELECT brand,
MIN(price) AS min_price
FROM products
GROUP BY brand;
```

	brand	min_price
▶	Amazon	999
	InstantPot	7999
	Philips	5999
	Samsung	69999
	OnePlus	49999
	Bose	19999
	Logitech	1299

## Questions on HAVING

1. Find all categories where the total sold\_quantity is greater than 1000.

```
SELECT category, SUM(sold_quantity) AS total_sold
FROM products
GROUP BY category
HAVING SUM(sold_quantity) > 1000;
```

	category	total_sold
▶	Electronics	1930

2. Find brands where the average price of products is more than 10000.

```
SELECT brand, AVG(price) AS avg_price
FROM products
GROUP BY brand
HAVING AVG(price) > 10000;
```

	brand	avg_price
▶	Samsung	69999.0000
	OnePlus	49999.0000
	Bose	19999.0000

3. Find categories where the maximum rating is greater than 4.7.

```
SELECT category, MAX(rating) AS max_rating
FROM products
GROUP BY category
HAVING MAX(rating) > 4.7;
```

	category	max_rating
▶	Electronics	4.8
	Mobiles	4.8

4. Find brands where the count of products is more than 2.

```
SELECT brand, COUNT(product_id) AS product_count
FROM products
GROUP BY brand
HAVING COUNT(product_id) > 2;
```

	brand	product_count
▶	Amazon	4

5. Find categories where the sum of stock is less than 200.

```
SELECT category, SUM(stock) AS total_stock
FROM products
GROUP BY category
HAVING SUM(stock) < 200;
```

	category	total_stock
	Kitchen	70
	Mobiles	45

Questions on ORDER BY

1. List all products ordered by price ascending.

```
select product_name, price from products order by price asc;
```

	product_name	price
▶	Amazon Basics Bag	999
	Logitech Mouse	1299
	Echo Dot	3499
	Fire TV Stick	3999
	Air Fryer	5999
	Instant Pot Duo	7999
	Kindle Paperwhite	9999
	Bose Headphones	19999
	OnePlus 11	49999
	Samsung Galaxy S23	69999

2. Show all products ordered by sold\_quantity descending.

select product\_name,sold\_quantity from products order by sold\_quantity desc;

	product_name	sold_quantity
▶	Logitech Mouse	600
	Echo Dot	500
	Fire TV Stick	450
	Amazon Basics Bag	400
	Kindle Paperwhite	300
	Instant Pot Duo	200
	Air Fryer	150
	Samsung Galaxy S23	100
	OnePlus 11	90
	Bose Headphones	80

3. Display products ordered by rating descending and then price ascending.

select product\_name,rating,price from products order by rating desc,price asc;

	product_name	rating	price
▶	Kindle Paperwhite	4.8	9999
	Samsung Galaxy S23	4.8	69999
	Instant Pot Duo	4.7	7999
	OnePlus 11	4.7	49999
	Echo Dot	4.6	3499
	Air Fryer	4.6	5999
	Fire TV Stick	4.5	3999
	Bose Headphones	4.5	19999
	Logitech Mouse	4.4	1299
	Amazon Basics Bag	4.3	999

4. List all products ordered by category ascending and sold\_quantity descending.

select product\_name,category,sold\_quantity from products order by category asc,sold\_quantity desc;

	product_name	category	sold_quantity
▶	Amazon Basics Bag	Accessories	400
	Logitech Mouse	Electronics	600
	Echo Dot	Electronics	500
	Fire TV Stick	Electronics	450
	Kindle Paperwhite	Electronics	300
	Bose Headphones	Electronics	80
	Instant Pot Duo	Kitchen	200
	Air Fryer	Kitchen	150
	Samsung Galaxy S23	Mobiles	100
	OnePlus 11	Mobiles	90

5. Show all products ordered by brand alphabetically.  
select product\_name ,brand from products order by brand;

	product_name	brand
▶	Echo Dot	Amazon
	Kindle Paperwhite	Amazon
	Fire TV Stick	Amazon
	Amazon Basics Bag	Amazon
	Bose Headphones	Bose
	Instant Pot Duo	InstantPot
	Logitech Mouse	Logitech
	OnePlus 11	OnePlus
	Air Fryer	Philips
	Samsung Galaxy S23	Samsung

## Questions on LIMIT

1. Show the first 5 products in the table.  
select \* from products limit 5;

	product_id	product_name	category	price	rating	stock	brand	sold_quantity
▶	1	Echo Dot	Electronics	3499	4.6	120	Amazon	500
	2	Kindle Paperwhite	Electronics	9999	4.8	80	Amazon	300
	3	Fire TV Stick	Electronics	3999	4.5	50	Amazon	450
	4	Instant Pot Duo	Kitchen	7999	4.7	30	InstantPot	200
	5	Air Fryer	Kitchen	5999	4.6	40	Philips	150
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

2. Show the top 3 highest-priced products.  
select \* from products order by price limit 3;

	product_id	product_name	category	price	rating	stock	brand	sold_quantity
▶	10	Amazon Basics Bag	Accessories	999	4.3	300	Amazon	400
	9	Logitech Mouse	Electronics	1299	4.4	200	Logitech	600
	1	Echo Dot	Electronics	3499	4.6	120	Amazon	500
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

3. Show the first 5 products when ordered by rating descending.  
SELECT \*

FROM products  
ORDER BY rating DESC  
LIMIT 5;

	product_id	product_name	category	price	rating	stock	brand	sold_quantity
▶	2	Kindle Paperwhite	Electronics	9999	4.8	80	Amazon	300
	6	Samsung Galaxy S23	Mobiles	69999	4.8	25	Samsung	100
	4	Instant Pot Duo	Kitchen	7999	4.7	30	InstantPot	200
	7	OnePlus 11	Mobiles	49999	4.7	20	OnePlus	90
	1	Echo Dot	Electronics	3499	4.6	120	Amazon	500
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

4. Show 2 products after skipping the first 5 rows.

select \* from products limit 2 offset 5;

	product_id	product_name	category	price	rating	stock	brand	sold_quantity
▶	6	Samsung Galaxy S23	Mobiles	69999	4.8	25	Samsung	100
	7	OnePlus 11	Mobiles	49999	4.7	20	OnePlus	90
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

5. Display the top 10 products with highest sold\_quantity.

select \* from products order by sold\_quantity desc limit 10;

	product_id	product_name	category	price	rating	stock	brand	sold_quantity
▶	9	Logitech Mouse	Electronics	1299	4.4	200	Logitech	600
	1	Echo Dot	Electronics	3499	4.6	120	Amazon	500
	3	Fire TV Stick	Electronics	3999	4.5	50	Amazon	450
	10	Amazon Basics Bag	Accessories	999	4.3	300	Amazon	400
	2	Kindle Paperwhite	Electronics	9999	4.8	80	Amazon	300
	4	Instant Pot Duo	Kitchen	7999	4.7	30	InstantPot	200
	5	Air Fryer	Kitchen	5999	4.6	40	Philips	150
	6	Samsung Galaxy S23	Mobiles	69999	4.8	25	Samsung	100
	7	OnePlus 11	Mobiles	49999	4.7	20	OnePlus	90
	8	Bose Headphones	Electronics	19999	4.5	15	Bose	80
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

## Questions on ASC / DESC

1. Show all products sorted by price ascending.

select product\_name,price from products order by price asc;

	product_name	price
▶	Amazon Basics Bag	999
	Logitech Mouse	1299
	Echo Dot	3499
	Fire TV Stick	3999
	Air Fryer	5999
	Instant Pot Duo	7999
	Kindle Paperwhite	9999
	Bose Headphones	19999
	OnePlus 11	49999
	Samsung Galaxy S23	69999

2. Show all products sorted by rating descending.  
 select product\_name, rating from products order by rating desc;

	product_name	rating
▶	Kindle Paperwhite	4.8
	Samsung Galaxy S23	4.8
	Instant Pot Duo	4.7
	OnePlus 11	4.7
	Echo Dot	4.6
	Air Fryer	4.6
	Fire TV Stick	4.5
	Bose Headphones	4.5
	Logitech Mouse	4.4
	Amazon Basics Bag	4.3

3. Display products sorted by sold\_quantity descending, then price ascending.  
 select product\_name, sold\_quantity, price from products order by sold\_quantity desc, price asc;

	product_name	sold_quantity	price
▶	Logitech Mouse	600	1299
	Echo Dot	500	3499
	Fire TV Stick	450	3999
	Amazon Basics Bag	400	999
	Kindle Paperwhite	300	9999
	Instant Pot Duo	200	7999
	Air Fryer	150	5999
	Samsung Galaxy S23	100	69999
	OnePlus 11	90	49999
	Bose Headphones	80	19999

4. List products sorted by category ascending, then sold\_quantity descending.  
 select product\_name, category, sold\_quantity from products order by category asc, sold\_quantity desc;



	product_name	category	sold_quantity
▶	Amazon Basics Bag	Accessories	400
	Logitech Mouse	Electronics	600
	Echo Dot	Electronics	500
	Fire TV Stick	Electronics	450
	Kindle Paperwhite	Electronics	300
	Bose Headphones	Electronics	80
	Instant Pot Duo	Kitchen	200
	Air Fryer	Kitchen	150
	Samsung Galaxy S23	Mobiles	100
	OnePlus 11	Mobiles	90

5. Show all products sorted by brand descending.  
 select product\_name,brand from products order by brand desc;

	product_name	brand
▶	Samsung Galaxy S23	Samsung
	Air Fryer	Philips
	OnePlus 11	OnePlus
	Logitech Mouse	Logitech
	Instant Pot Duo	InstantPot
	Bose Headphones	Bose
	Echo Dot	Amazon
	Kindle Paperwhite	Amazon
	Fire TV Stick	Amazon
	Amazon Basics Bag	Amazon