

```
SELECT * FROM customers
ORDER BY customer_id
LIMIT 10;
```

customer_id	customer_name	customer_phone	email	date_of_birth	registration_date
1	John Smith	555-1001	john.smith@email.com	03/15/1985	01/15/2023
2	Sarah Johnson	555-1002	sarah.j@email.com	07/22/1990	02/20/2023
3	Michael Brown	555-1003	mike.brown@email.com	11/08/1988	01/30/2023
4	Emily Davis	555-1004	emily.davis@email.com	05/12/1992	03/10/2023
5	David Wilson	555-1005	david.wilson@email.com	09/25/1987	02/05/2023
6	Lisa Anderson	555-1006	lisa.anderson@email.com	12/03/1991	04/18/2023
7	Robert Taylor	555-1007	robert.taylor@email.com	08/17/1989	03/25/2023
8	Jennifer Martinez	555-1008	jen.martinez@email.com	04/28/1993	05/12/2023
9	Christopher Lee	555-1009	chris.lee@email.com	10/14/1986	01/08/2023
10	Amanda White	555-1010	amanda.white@email.com	06/19/1994	06/02/2023

OK, 10 records retrieved in 0.887ms

```
SELECT * FROM products
WHERE price > 50
ORDER BY price DESC;
```

product_id	product_name	product_description	price	stock_quantity	supplier_id	category	created_date
1	Laptop Pro 15	High-performance laptop with 15-inch display	1299.99	25	1	Electronics	09/26/2025
4	4K Monitor	27-inch 4K UHD monitor with HDR support	399.99	30	2	Electronics	09/26/2025
10	Office Chair	Ergonomic office chair with lumbar support	299.99	15	4	Furniture	09/26/2025
5	Designer Jacket	Premium leather jacket in black	249.99	20	3	Fashion	09/26/2025
8	Bluetooth Headphones	Noise-canceling wireless headphones	199.99	45	2	Electronics	09/26/2025
14	Winter Coat	Warm winter coat with hood	179.99	30	3	Fashion	09/26/2025
12	Fitness Tracker	Smart fitness tracker with heart rate monitor	149.99	35	5	Electronics	09/26/2025
6	Running Shoes	Professional running shoes for athletes	129.99	60	5	Sports	09/26/2025
15	Car Battery	12V automotive battery with 3-year warranty	119.99	20	7	Automotive	09/26/2025
3	Gaming Keyboard	Mechanical gaming keyboard with RGB lighting	89.99	75	2	Electronics	09/26/2025
13	Cooking Pan Set	Non-stick cooking pan set of 3	89.99	25	4	Home	09/26/2025
7	Coffee Maker	Automatic drip coffee maker with timer	79.99	40	4	Home	09/26/2025

OK, 14 records retrieved in 0.957ms

```
SELECT COUNT(*) as total_customers,
       AVG(YEAR(CURDATE()) - YEAR(date_of_birth)) as avg_age
FROM customers
WHERE date_of_birth IS NOT NULL;
```

total_customers	avg_age
12	35.5000

OK, 1 record retrieved in 0.725ms

```
SELECT c.customer_id, c.customer_name, c.email,
       a.address_line_1, a.address_line_2, a.city, a.state, a.postal_code
FROM customers c
INNER JOIN addresses a ON c.customer_id = a.customer_id
ORDER BY c.customer_name;
```

customer_id	customer_name	email	address_line_1	address_line_2	city	state	postal_code
10	Amanda White	amanda.white@email.com	159 Poplar Place	NULL	Phoenix	AZ	85001
9	Christopher Lee	chris.lee@email.com	963 Spruce Circle	NULL	Portland	OR	97201
5	David Wilson	david.wilson@email.com	987 Cedar Lane	NULL	Seattle	WA	98101
5	David Wilson	david.wilson@email.com	147 Corporate Blvd	Floor 15	Seattle	WA	98102
4	Emily Davis	emily.davis@email.com	654 Maple Drive	NULL	Miami	FL	33101
11	James Garcia	james.garcia@email.com	357 Ash Boulevard	NULL	Atlanta	GA	30301
8	Jennifer Martinez	jen.martinez@email.com	741 Willow Way	NULL	Austin	TX	73301
8	Jennifer Martinez	jen.martinez@email.com	852 Commerce St	NULL	Austin	TX	73302
1	John Smith	john.smith@email.com	123 Main St	Apt 4B	New York	NY	10001
1	John Smith	john.smith@email.com	456 Business Ave	Suite 200	New York	NY	10002
6	Lisa Anderson	lisa.anderson@email.com	258 Birch Street	NULL	Denver	CO	80201
17	Mary Rodriguez	mary.rodriguez@email.com	468 Hickory Heights	NULL	Nashville	TN	37201

OK, 16 records retrieved in 1.168ms

```
SELECT c.customer_id, c.customer_name, c.email,
       a.address_line_1, a.city, a.state
FROM customers c
LEFT JOIN addresses a ON c.customer_id = a.customer_id
ORDER BY c.customer_name;
```

customer_id	customer_name	email	address_line_1	city	state
10	Amanda White	amanda.white@email.com	159 Poplar Place	Phoenix	AZ
9	Christopher Lee	chris.lee@email.com	963 Spruce Circle	Portland	OR
5	David Wilson	david.wilson@email.com	987 Cedar Lane	Seattle	WA
5	David Wilson	david.wilson@email.com	147 Corporate Blvd	Seattle	WA
4	Emily Davis	emily.davis@email.com	654 Maple Drive	Miami	FL
11	James Garcia	james.garcia@email.com	357 Ash Boulevard	Atlanta	GA
8	Jennifer Martinez	jen.martinez@email.com	741 Willow Way	Austin	TX
8	Jennifer Martinez	jen.martinez@email.com	852 Commerce St	Austin	TX
1	John Smith	john.smith@email.com	123 Main St	New York	NY
1	John Smith	john.smith@email.com	456 Business Ave	New York	NY
6	Lisa Anderson	lisa.anderson@email.com	258 Birch Street	Denver	CO
12	Mary Rodriguez	mary.rodriguez@email.com	468 Hickory Heights	Nashville	TN

OK, 16 records retrieved in 1.393ms

```
SELECT a.address_id, a.address_line_1, a.city, a.state,
       rt.address_type_description
FROM addresses a
JOIN ref_address_types rt ON a.address_type_code = rt.address_type_code
ORDER BY a.city;
```

address_id	address_line_1	city	state	address_type_description
15	357 Ash Boulevard	Atlanta	GA	Home Address
11	741 Willow Way	Austin	TX	Home Address
12	852 Commerce St	Austin	TX	Shipping Address
10	369 Elm Avenue	Boston	MA	Home Address
4	321 Pine Road	Chicago	IL	Home Address
5	321 Pine Road	Chicago	IL	Billing Address
9	258 Birch Street	Denver	CO	Home Address
3	789 Oak Street	Los Angeles	CA	Home Address
6	654 Maple Drive	Miami	FL	Home Address
16	468 Hickory Heights	Nashville	TN	Home Address
1	123 Main St	New York	NY	Home Address
2	456 Business Ave	New York	NY	Work Address

OK, 16 records retrieved in 0.887ms

```
SELECT s.supplier_name,
       COUNT(p.product_id) as product_count,
       AVG(p.price) as avg_price,
       MIN(p.price) as min_price,
       MAX(p.price) as max_price
FROM suppliers s
LEFT JOIN products p ON s.supplier_id = p.supplier_id
GROUP BY s.supplier_id, s.supplier_name
ORDER BY product_count DESC;
```

supplier_name	product_count	avg_price	min_price	max_price
TechCorp Industries	4	341.490000	15.99	1299.99
Home Essentials	4	127.490000	39.99	299.99
Global Electronics	3	229.990000	89.99	399.99
Sports Pro	3	101.656667	24.99	149.99
Fashion Forward	2	214.990000	179.99	249.99
Book World	2	54.990000	49.99	59.99
Auto Parts Plus	1	119.990000	119.99	119.99
Garden Paradise	1	69.990000	69.99	69.99

OK, 8 records retrieved in 1.272ms

```
SELECT product_name, price, product_description
FROM products
WHERE supplier_id IN (
    SELECT supplier_id
    FROM suppliers
    WHERE supplier_city = 'New York'
);
```

product_name	price	product_description
Laptop Pro 15	1299.99	High-performance laptop with 15-inch display
Wireless Mouse	29.99	Ergonomic wireless mouse with USB receiver
Smartphone Case	19.99	Protective case for latest smartphone models
Tablet Stand	15.99	Adjustable stand for tablets and phones

OK, 4 records retrieved in 0.749ms

```
SELECT c.customer_name,
       COUNT(a.address_id) as total_addresses,
       GROUP_CONCAT(DISTINCT rt.address_type_description) as address_types
FROM customers c
LEFT JOIN addresses a ON c.customer_id = a.customer_id
LEFT JOIN ref_address_types rt ON a.address_type_code = rt.address_type_code
GROUP BY c.customer_id, c.customer_name
HAVING total_addresses > 1
ORDER BY total_addresses DESC;
```

customer_name	total_addresses	address_types
John Smith	2	Home Address,Work Address
Michael Brown	2	Billing Address,Home Address
David Wilson	2	Home Address,Work Address
Jennifer Martinez	2	Home Address,Shipping Address

OK, 4 records retrieved in 2.168ms

```

SELECT product_name, price, supplier_id,
CASE
    WHEN price > 100 THEN 'Expensive'
    WHEN price > 50 THEN 'Moderate'
    WHEN price > 20 THEN 'Affordable'
    ELSE 'Budget'
END as price_category
FROM products
ORDER BY price DESC;

```

product_name	price	supplier_id	price_category
Laptop Pro 15	1299.99	1	Expensive
4K Monitor	399.99	2	Expensive
Office Chair	299.99	4	Expensive
Designer Jacket	249.99	3	Expensive
Bluetooth Headphones	199.99	2	Expensive
Winter Coat	179.99	3	Expensive
Fitness Tracker	149.99	5	Expensive
Running Shoes	129.99	5	Expensive
Car Battery	119.99	7	Expensive
Gaming Keyboard	89.99	2	Moderate
Cooking Pan Set	89.99	4	Moderate
Coffee Maker	79.99	4	Moderate

OK, 20 records retrieved in 0.781ms

```

SELECT s.supplier_name, s.supplier_city, s.supplier_phone,
COUNT(p.product_id) as products_supplied,
AVG(p.price) as avg_product_price,
SUM(p.price) as total_inventory_value
FROM suppliers s
LEFT JOIN products p ON s.supplier_id = p.supplier_id
GROUP BY s.supplier_id, s.supplier_name, s.supplier_city, s.supplier_phone
ORDER BY products_supplied DESC, total_inventory_value DESC;

```

supplier_name	supplier_city	supplier_phone	products_supplied	avg_product_price	total_inventory_value
TechCorp Industries	New York	555-0101	4	341.490000	1365.96
Home Essentials	Chicago	555-0104	4	127.490000	509.96
Global Electronics	Los Angeles	555-0102	3	229.990000	689.97
Sports Pro	Denver	555-0105	3	101.656667	304.97
Fashion Forward	Miami	555-0103	2	214.990000	429.98
Book World	Seattle	555-0106	2	54.990000	109.98
Auto Parts Plus	Detroit	555-0107	1	119.990000	119.99
Garden Paradise	Portland	555-0108	1	69.990000	69.99

OK, 8 records retrieved in 0.966ms

```

SELECT state, city,
COUNT(DISTINCT c.customer_id) as customer_count,
COUNT(a.address_id) as total_addresses
FROM addresses a
JOIN customers c ON a.customer_id = c.customer_id
GROUP BY state, city
ORDER BY customer_count DESC, city;

```

state	city	customer_count	total_addresses
GA	Atlanta	1	1
TX	Austin	1	2
MA	Boston	1	1
IL	Chicago	1	2
CO	Denver	1	1
CA	Los Angeles	1	1
FL	Miami	1	1
TN	Nashville	1	1
NY	New York	1	2
AZ	Phoenix	1	1
OR	Portland	1	1
WA	Seattle	1	2

OK, 12 records retrieved in 1.058ms

```

SELECT c.customer_name, c.email, c.customer_phone,
a.address_line_1, a.city, a.state, a.postal_code,
rt.address_type_description
FROM customers c
LEFT JOIN addresses a ON c.customer_id = a.customer_id
LEFT JOIN ref_address_types rt ON a.address_type_code = rt.address_type_code
ORDER BY c.customer_name, rt.address_type_description;

```

customer_name	email	customer_phone	address_line_1	city	state	postal_code	address_type_description
Amanda White	amanda.white@email.com	555-1010	159 Poplar Place	Phoenix	AZ	85001	Home Address
Christopher Lee	chris.lee@email.com	555-1009	963 Spruce Circle	Portland	OR	97201	Home Address
David Wilson	david.wilson@email.com	555-1005	987 Cedar Lane	Seattle	WA	98101	Home Address
David Wilson	david.wilson@email.com	555-1005	147 Corporate Blvd	Seattle	WA	98102	Work Address
Emily Davis	emily.davis@email.com	555-1004	654 Maple Drive	Miami	FL	33101	Home Address
James Garcia	james.garcia@email.com	555-1011	357 Ash Boulevard	Atlanta	GA	30301	Home Address
Jennifer Martinez	jen.martinez@email.com	555-1008	741 Willow Way	Austin	TX	73301	Home Address
Jennifer Martinez	jen.martinez@email.com	555-1008	852 Commerce St	Austin	TX	73302	Shipping Address
John Smith	john.smith@email.com	555-1001	123 Main St	New York	NY	10001	Home Address
John Smith	john.smith@email.com	555-1001	456 Business Ave	New York	NY	10002	Work Address
Lisa Anderson	lisa.anderson@email.com	555-1006	258 Birch Street	Denver	CO	80201	Home Address

OK, 16 records retrieved in 1.268ms

sql> CREATE VIEW customer\_summary AS

SELECT c.customer\_id, c.customer\_name, c.email, c.customer\_phone,

COUNT(a.address\_id) as address\_count,

GROUP\_CONCAT(DISTINCT a.city) as cities\_lived,

GROUP\_CONCAT(DISTINCT rt.address\_type\_description) as address\_types

FROM customers c

LEFT JOIN addresses a ON c.customer\_id = a.customer\_id

LEFT JOIN ref\_address\_types rt ON a.address\_type\_code = rt.address\_type\_code

GROUP BY c.customer\_id, c.customer\_name, c.email, c.customer\_phone;

MySQL Error (1050): Table 'customer\_summary' already exists

sql> SELECT \* FROM customer\_summary

WHERE address\_count > 1

ORDER BY address\_count DESC;

customer_id	customer_name	email	customer_phone	address_count	cities_lived	address_types
1	John Smith	john.smith@email.com	555-1001	2	New York	Home Address,Work Address
3	Michael Brown	mike.brown@email.com	555-1003	2	Chicago	Billing Address,Home Address
5	David Wilson	david.wilson@email.com	555-1005	2	Seattle	Home Address,Work Address
8	Jennifer Martinez	jen.martinez@email.com	555-1008	2	Austin	Home Address,Shipping Address

OK, 4 records retrieved in 1.14ms

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