

SQL Queries

1. SQL SELECT

```
SELECT column1, column2, ...  
FROM table_name;  
SELECT * FROM table_name;
```

The screenshot shows the Programiz Online SQL Editor interface. On the left, there's a sidebar with a tree view of database tables: Customers, Orders, and Shippings. The main area is divided into three sections: Input, Output, and Available Tables. The Input section contains the SQL query: `SELECT Country FROM Customers;`. The Output section shows the result of the query: a list of countries (USA, USA, UK, UK). The Available Tables section shows the structure and data of the Customers, Orders, and Shippings tables.

Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

Orders

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

Shippings

shipping_id	status	customer
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2. SQL ORDER BY

```
SELECT column1, column2, ...  
FROM table_name  
ORDER BY column1, column2, ... ASC|DESC;
```

The screenshot shows the Programiz Online SQL Editor interface. On the left, there's a sidebar with a tree view of database tables: Customers, Orders, and Shippings. The main area is divided into three sections: Input, Output, and Available Tables. The Input section contains the SQL query: `SELECT * FROM Customers ORDER BY country DESC;`. The Output section shows the result of the query: a list of customers ordered by country in descending order (USA, USA, UK, UK, UAE). The Available Tables section shows the structure and data of the Customers, Orders, and Shippings tables.

Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

Orders

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

Shippings

shipping_id	status	customer
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3. SQL INSERT INTO

INSERT INTO *table_name* (*column1*, *column2*, *column3*, ...)
VALUES (*value1*, *value2*, *value3*, ...);

The screenshot shows the Programiz Online SQL Editor interface. On the left, a sidebar lists database tables: Customers, Orders, and Shippings. The main 'Input' area contains the following SQL code:

```
-- Online SQL Editor to Run SQL Online.  
-- Use the editor to create new tables, insert data and all other SQL operations.  
  
INSERT INTO Customers (first_name, age, country)  
VALUES ('Cardinal', 31, 'USA');  
select * from customers
```

The 'Output' area displays the result of the query as a table:

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

On the right, the 'Available Tables' section shows the current state of the 'Customers' and 'Orders' tables. The 'Customers' table now includes the new entry with customer_id 6.

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
6	Cardinal	Tom B. Erichsen	46	Norway
7	Cardinal	Tom B. Erichsen	46	Norway
8	Cardinal		31	USA
9	Cardinal		31	USA
10	Cardinal		31	USA

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4

4. SQL UPDATE

UPDATE *table_name*
SET *column1* = *value1*, *column2* = *value2*, ...
WHERE *condition*;

The screenshot shows the Programiz Online SQL Editor interface. On the left, the same sidebar is visible. The main 'Input' area contains the following SQL code:

```
-- Online SQL Editor to Run SQL Online.  
-- Use the editor to create new tables, insert data and all other SQL operations.  
  
UPDATE Customers  
SET first_name = 'Alfred Schmidt', country = 'Frankfurt'  
WHERE customer_id = 1;  
select*from Customers
```

The 'Output' area displays the result of the query as a table:

customer_id	first_name	last_name	age	country
1	Alfred Schmidt	Doe	31	Frankfurt
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

On the right, the 'Available Tables' section shows the updated state of the 'Customers' and 'Orders' tables. The 'Customers' table now shows the first_name 'Alfred Schmidt' and country 'Frankfurt' for customer_id 1.

customer_id	first_name	last_name	age	country
1	Alfred Schmidt	Doe	31	Frankfurt
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
6	Cardinal	Tom B. Erichsen	46	Norway
7	Cardinal	Tom B. Erichsen	46	Norway
8	Cardinal		31	USA
9	Cardinal		31	USA
10	Cardinal		31	USA

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4

5.SQL MIN()

```
SELECT MIN(column_name)
FROM table_name
WHERE condition;
```

The screenshot shows the Programiz Online SQL Editor interface. On the left, there is a schema tree with three tables: Customers, Orders, and Shippings. The Customers table has columns: customer_id (int), first_name (varchar(100)), last_name (varchar(100)), age (int), and country (varchar(100)). The Orders table has columns: order_id (integer), item (varchar(100)), amount (integer), and customer_id (integer). The Shippings table has columns: shipping_id (integer), status (integer), and customer (integer). The main input area contains the following SQL query:

```
-- Online SQL Editor to Run SQL Online.
-- Use the editor to create new tables, insert data and all other SQL operations.
SELECT MIN(age) AS Smallestage
FROM Customers;
```

The output area shows the result of the query:

Smallestage
22

On the right, the 'Available Tables' section displays the data for the Customers and Orders tables.

Customers

customer_id	first_name	last_name	age	country
1	Alfred Schmidt	Doe	31	Frankfurt
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
	Cardinal	Tom B. Erichsen	46	Norway
	Cardinal	Tom B. Erichsen	46	Norway
	Cardinal		31	USA
	Cardinal		31	USA
	Cardinal		31	USA

Orders

order_id	item	amount	customer_id
1	Keyboard	400	4

6.SQL COUNT

```
SELECT COUNT(column_name)
FROM table_name
WHERE condition;
```

The screenshot shows the Programiz Online SQL Editor interface. On the left, there is a schema tree with three tables: Customers, Orders, and Shippings. The Customers table has columns: customer_id (int), first_name (varchar(100)), last_name (varchar(100)), age (int), and country (varchar(100)). The Orders table has columns: order_id (integer), item (varchar(100)), amount (integer), and customer_id (integer). The Shippings table has columns: shipping_id (integer), status (integer), and customer (integer). The main input area contains the following SQL query:

```
-- Online SQL Editor to Run SQL Online.
-- Use the editor to create new tables, insert data and all other SQL operations.
SELECT COUNT(first_name)
FROM Customers;
```

The output area shows the result of the query:

COUNT(first_name)
10

On the right, the 'Available Tables' section displays the data for the Customers and Orders tables.

Customers

customer_id	first_name	last_name	age	country
1	Alfred Schmidt	Doe	31	Frankfurt
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
	Cardinal	Tom B. Erichsen	46	Norway
	Cardinal	Tom B. Erichsen	46	Norway
	Cardinal		31	USA
	Cardinal		31	USA
	Cardinal		31	USA

Orders

order_id	item	amount	customer_id
1	Keyboard	400	4

7. SQL INNER JOIN

```
SELECT column_name(s)
FROM table1
INNER JOIN table2
ON table1.column_name = table2.column_name;
```

Programiz Online SQL Editor

Input

```
-- Online SQL Editor to Run SQL Online.
-- Use the editor to create new tables, insert data and all other SQL operations.
SELECT Orders.order_id, Customers.first_name, Shippings.status
FROM ((Orders
INNER JOIN customers ON Orders.customer_id = Customers.customer_id)
INNER JOIN shippings ON shippings.shipping_id = Shippings.Shipping_id);
```

Available Tables

Table	Cardinality	Columns
Customers	31	USA
Orders	31	USA
Shippings	31	USA

Customers

- customer_id [int]
- first_name [varchar(100)]
- last_name [varchar(100)]
- age [int]
- country [varchar(100)]

Orders

- order_id [integer]
- item [varchar(100)]
- amount [integer]
- customer_id [integer]

Shippings

- shipping_id [integer]
- status [integer]
- customer [integer]

Output

order_id	first_name	status
1	John	Pending
1	John	Pending
1	John	Delivered
1	John	Pending
1	John	Delivered

Orders

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

Shippings

shipping_id	status	customer
1	Pending	2
2	Pending	4
3	Delivered	3
4	Pending	5
5	Delivered	1

8. SQL LEFT JOIN

```
SELECT column_name(s)
FROM table1
LEFT JOIN table2
ON table1.column_name = table2.column_name;
```

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Programiz Online SQL Editor

Input

```
-- Online SQL Editor to Run SQL Online.
-- Use the editor to create new tables, insert data and all other SQL operations.
SELECT Customers.first_name, Orders.order_id
FROM Customers
LEFT JOIN Orders ON Customers.customer_id = Orders.customer_id
ORDER BY Customers.first_name;
```

Available Tables

Table	Cardinality	Columns
Customers	31	USA
Orders	31	USA
Shippings	31	USA

Customers

- customer_id [int]
- first_name [varchar(100)]
- last_name [varchar(100)]
- age [int]
- country [varchar(100)]

Orders

- order_id [integer]
- item [varchar(100)]
- amount [integer]
- customer_id [integer]

Shippings

- shipping_id [integer]
- status [integer]
- customer [integer]

Output

first_name	order_id
Cardinal	
Cardinal	
Cardinal	
David	3
John	1
John	2
Robert	5

Orders

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

Shippings

shipping_id	status	customer
1	Pending	2
2	Pending	4
3	Delivered	3
4	Pending	5
5	Delivered	1