

```
mysql> create database onlinesales;  
Query OK, 1 row affected (0.02 sec)
```

```
mysql> use onlinesales;  
Database changed
```

```
mysql> CREATE TABLE customers (  
->     customer_id INT PRIMARY KEY,  
->     customer_name VARCHAR(100) NOT NULL,  
->     email VARCHAR(100) UNIQUE  
-> );  
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> desc customers;
```

Field	Type	Null	Key	Default	Extra
customer_id	int	NO	PRI	NULL	
customer_name	varchar(100)	NO		NULL	
email	varchar(100)	YES	UNI	NULL	

```
3 rows in set (0.01 sec)
```

```
mysql> INSERT INTO customers (customer_id, customer_name, email) VALUES  
-> (1, 'John Doe', 'john.doe@example.com'),  
-> (2, 'Jane Smith', 'jane.smith@example.com'),  
-> (3, 'Alice Johnson', 'alice.j@example.com'),  
-> (4, 'Michael Brown', 'michael.brown@example.com'),  
-> (5, 'Sarah Davis', 'sarah.davis@example.com');  
Query OK, 5 rows affected (0.04 sec)  
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> select*from customers;
```

customer_id	customer_name	email
1	John Doe	john.doe@example.com
2	Jane Smith	jane.smith@example.com
3	Alice Johnson	alice.j@example.com
4	Michael Brown	michael.brown@example.com
5	Sarah Davis	sarah.davis@example.com

```
mysql> CREATE TABLE customer_orders (  
-> order_id INT PRIMARY KEY,  
-> customer_id INT NOT NULL,  
-> product_id INT NOT NULL,  
-> order_date DATE NOT NULL,  
-> shipping_date DATE,  
-> amount DECIMAL(10, 2) NOT NULL CHECK (amount >= 0),  
-> order_status VARCHAR(20) NOT NULL CHECK (order_status IN ('Pending', 'Shipped', 'Delivered', 'Cancelled')),  
-> FOREIGN KEY (customer_id) REFERENCES customers(customer_id),  
-> FOREIGN KEY (product_id) REFERENCES products(product_id)  
-> );
```

ERROR 1824 (HY000): Failed to open the referenced table 'products'

```
mysql> CREATE TABLE products (  
-> product_id INT PRIMARY KEY,  
-> product_name VARCHAR(100) NOT NULL,  
-> price DECIMAL(10, 2) NOT NULL CHECK (price >= 0),  
-> stock_quantity INT NOT NULL CHECK (stock_quantity >= 0)  
-> );
```

Query OK, 0 rows affected (0.08 sec)

```
mysql> desc products;
```

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	
product_name	varchar(100)	NO		NULL	
price	decimal(10,2)	NO		NULL	
stock_quantity	int	NO		NULL	

4 rows in set (0.00 sec)

```
mysql> INSERT INTO products (product_id, product_name, price, stock_quantity) VALUES
```

```
-> (1, 'Laptop', 999.99, 50),  
-> (2, 'Smartphone', 599.50, 100),  
-> (3, 'Headphones', 89.99, 200),  
-> (4, 'Tablet', 399.00, 75),  
-> (5, 'Smartwatch', 199.95, 150);
```

Query OK, 5 rows affected (0.03 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
mysql> select*from products;
```

Records: 5 Duplicates: 0 Warnings: 0

mysql> select*from products;

product_id	product_name	price	stock_quantity
1	Laptop	999.99	50
2	Smartphone	599.50	100
3	Headphones	89.99	200
4	Tablet	399.00	75
5	Smartwatch	199.95	150

5 rows in set (0.00 sec)

```
mysql> CREATE TABLE customer_orders (  
-> order_id INT PRIMARY KEY,  
-> customer_id INT NOT NULL,  
-> product_id INT NOT NULL,  
-> order_date DATE NOT NULL,  
-> shipping_date DATE,  
-> amount DECIMAL(10, 2) NOT NULL CHECK (amount >= 0),  
-> order_status VARCHAR(20) NOT NULL CHECK (order_status IN ('Pending', 'Shipped', 'Delivered', 'Cancelled')),  
-> FOREIGN KEY (customer_id) REFERENCES customers(customer_id),  
-> FOREIGN KEY (product_id) REFERENCES products(product_id)  
-> );
```

Query OK, 0 rows affected (0.08 sec)

mysql> desc customer_orders;

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	
customer_id	int	NO	MUL	NULL	
product_id	int	NO	MUL	NULL	
order_date	date	NO		NULL	
shipping_date	date	YES		NULL	
amount	decimal(10,2)	NO		NULL	
order_status	varchar(20)	NO		NULL	

7 rows in set (0.01 sec)

```
mysql> INSERT INTO customer_orders (order_id, customer_id, product_id, order_date, shipping_date, amount, order_status) VALUES
-> (2001, 1, 1, '2025-09-28', '2025-09-29', 999.99, 'Delivered'), -- John Doe ordered a Laptop
-> (2002, 2, 2, '2025-09-29', '2025-09-30', 599.50, 'Shipped'), -- Jane Smith ordered a Smartphone
-> (2003, 3, 3, '2025-09-30', NULL, 89.99, 'Pending'), -- Alice Johnson ordered Headphones
-> (2004, 4, 4, '2025-09-30', NULL, 399.00, 'Pending'), -- Michael Brown ordered a Tablet
-> (2005, 5, 5, '2025-09-30', NULL, 199.95, 'Pending');
```

Query OK, 5 rows affected (0.03 sec)
Records: 5 Duplicates: 0 Warnings: 0

```
mysql> select*from customers_orders;
ERROR 1146 (42S02): Table 'onlinesales.customers_orders' doesn't exist
```

```
mysql> select*from customer_orders;
```

order_id	customer_id	product_id	order_date	shipping_date	amount	order_status
2001	1	1	2025-09-28	2025-09-29	999.99	Delivered
2002	2	2	2025-09-29	2025-09-30	599.50	Shipped
2003	3	3	2025-09-30	NULL	89.99	Pending
2004	4	4	2025-09-30	NULL	399.00	Pending
2005	5	5	2025-09-30	NULL	199.95	Pending

5 rows in set (0.00 sec)

```
mysql> CREATE TABLE suppliers (
-> supplier_id INT PRIMARY KEY,
-> supplier_name VARCHAR(100) NOT NULL,
-> contact_email VARCHAR(100) UNIQUE NOT NULL,
-> location VARCHAR(100) NOT NULL,
-> phone_number VARCHAR(20)
-> );
```

Query OK, 0 rows affected (0.09 sec)

```
mysql> desc suppliers;
```

Field	Type	Null	Key	Default	Extra
supplier_id	int	NO	PRI	NULL	
supplier_name	varchar(100)	NO		NULL	
contact_email	varchar(100)	NO	UNI	NULL	
location	varchar(100)	NO		NULL	
phone_number	varchar(20)	YES		NULL	


```
mysql> INSERT INTO suppliers (supplier_id, supplier_name, contact_email, location, phone_number) VALUES
-> (1, 'TechWorld Inc.', 'sales@techworld.com', 'New York, USA', '+1-555-0101'),
-> (2, 'GadgetHub Ltd.', 'info@gadgethub.com', 'London, UK', '+44-20-7946-0958'),
-> (3, 'ElectroMart', 'contact@electromart.com', 'Tokyo, Japan', '+81-3-1234-5678'),
-> (4, 'InnoTech Solutions', 'support@innotech.com', 'Berlin, Germany', '+49-30-123456'),
-> (5, 'Global Electronics', 'orders@globalelec.com', 'Sydney, Australia', '+61-2-9267-1234');
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> select*from suppliers;
```

supplier_id	supplier_name	contact_email	location	phone_number
1	TechWorld Inc.	sales@techworld.com	New York, USA	+1-555-0101
2	GadgetHub Ltd.	info@gadgethub.com	London, UK	+44-20-7946-0958
3	ElectroMart	contact@electromart.com	Tokyo, Japan	+81-3-1234-5678
4	InnoTech Solutions	support@innotech.com	Berlin, Germany	+49-30-123456
5	Global Electronics	orders@globalelec.com	Sydney, Australia	+61-2-9267-1234

```
5 rows in set (0.00 sec)
```

```
mysql> SELECT EXTRACT(MONTH FROM order_date) as month
-> FROM online_sales;
ERROR 1146 (42S02): Table 'onlinesales.online_sales' doesn't exist
mysql> SELECT EXTRACT(MONTH FROM order_date) as month
-> FROM customer_orders;
```

month
9
9
9
9
9

```
5 rows in set (0.00 sec)
```

```
mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date);
```

```

MySQL 8.0 Command Line Cl... x + v
mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date);
+-----+-----+
| year | month |
+-----+-----+
| 2025 | 9 |
+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month, SUM(amount) as revenue
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date);
+-----+-----+-----+
| year | month | revenue |
+-----+-----+-----+
| 2025 | 9 | 2288.43 |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month, COUNT(DISTINCT order_id) as order_volume
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date);
+-----+-----+-----+
| year | month | order_volume |
+-----+-----+-----+
| 2025 | 9 | 5 |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month, SUM(amount) as revenue
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date)
-> ORDER BY year, month;
+-----+-----+-----+
| year | month | revenue |
+-----+-----+-----+
| 2025 | 9 | 2288.43 |
+-----+-----+-----+
1 row in set (0.00 sec)

```



```
+-----+-----+-----+
| year | month | revenue |
+-----+-----+-----+
| 2025 |     9 | 2288.43 |
+-----+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month, COUNT(DISTINCT order_id) as order_volume
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date);
```

```
+-----+-----+-----+
| year | month | order_volume |
+-----+-----+-----+
| 2025 |     9 |             5 |
+-----+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month, SUM(amount) as revenue
-> FROM customer_orders
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date)
-> ORDER BY year, month;
```

```
+-----+-----+-----+
| year | month | revenue |
+-----+-----+-----+
| 2025 |     9 | 2288.43 |
+-----+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT EXTRACT(YEAR FROM order_date) as year, EXTRACT(MONTH FROM order_date) as month, SUM(amount) as revenue
-> FROM customer_orders
-> WHERE order_date BETWEEN '2025-09-01' AND '2025-09-30'
-> GROUP BY EXTRACT(YEAR FROM order_date), EXTRACT(MONTH FROM order_date)
-> ORDER BY year, month;
```

```
+-----+-----+-----+
| year | month | revenue |
+-----+-----+-----+
| 2025 |     9 | 2288.43 |
+-----+-----+-----+
```

1 row in set (0.00 sec)

mysql> |