

```
create database ecommerce;  
use ecommerce;
```

```
create table product  
(product_id int auto_increment primary key,  
product_name varchar(75) not null,  
category varchar(50) not null,  
price decimal(15,2) not null,  
stock_quantity int not null);
```

```
create table customers  
(customer_id int auto_increment primary key,  
first_name varchar(70) not null,  
last_name varchar(65) not null,  
email_id varchar(55) not null,  
address varchar(45) not null,  
contact_number varchar(85) not null);
```

```
create table orders  
(order_id int auto_increment primary key,
```

```

customer_id int not null,
order_date date,
total_amount decimal(18,3));

create table order_details
(orderdetails_id int auto_increment primary key,
order_id int not null,
product_id int not null,
quantity int not null,
price decimal(15,2)not null);

alter table orders add foreign key (customer_id) references customers (customer_id);
alter table order_details add foreign key(order_id) references orders (order_id);
alter table order_details add foreign key (product_id) references product (product_id);

insert into product values(01,"smartphone","Electronics",15000,75),
(02,"mixture","Electronics",7500,60),
(03,"television","Electronics",10000,55),
(04,"freeze","Electronics",18000,120),
(05,"sofas","Furniture",25000,95),
(06,"Bed","Furniture",8500,35),
(07,"tables","Furniture",1500,48),
(08,"goldchain","jeweler",75000,69),
(09,"goldrings","jeweler",23000,55),
(10,"goldearring","jeweler",32000,40);

insert into customers values
(1,"aashish","jain","aashis@123gmail.com","dewas",9826533586),
(2,"ramesh","shah","ramesh@123gmail.com","ujjain",9856498566),
(3,"krishn","murti","krishn@123gmail.com","rau",9845755698),
(4,"dev","aaryan","dev@123gmail.com","bhopal",8758944569),
(5,"ravi","roy","ravi@123gmail.com","indore",8874523559),
(6,"sunny","verma","sunny@123gmail.com","up",7745874588),
(7,"aditya","sahu","aadi@123gmail.com","shrilanka",8974584456),
(8,"seema","jain","seema@123gmail.com","kashmir",8874577848),
(9,"shivam","jain","shivam@123gmail.com","jamu",9856844785),
(10,"radhika","sen","radhu@123gmail.com","shrinagar",8874598658);

insert into orders values
(001,1,"2024-1-1",35000),
(002,2,"2024-2-1",45000),
(003,3,"2024-3-1",55000),
(004,4,"2024-4-1",65000),
(005,5,"2024-5-1",55000),
(006,6,"2024-2-1",45000),
(007,7,"2024-6-1",40000),
(008,8,"2024-2-1",60000),
(009,9,"2024-7-1",35000),
(0010,10,"2024-3-1",55000);

insert into order_details values
(1001,001,01,25,15000),
(1002,002,02,35,7500),
(1003,003,03,10,10000),
(1004,004,04,100,18000),
(1005,005,05,150,25000),

```

```
(1006,006,06,50,8500),  
(1007,007,07,80,1500),  
(1008,008,08,300,75000),  
(1009,009,09,250,23000),  
(10010,0010,010,120,32000);
```

```
select * from product;  
select * from customers;  
select * from orders;  
select * from order_details;
```

*-- Q1 Retrieve all products from the product table.*

```
select * from product;
```

*-- Q2 Find the names and prices of all products in  
-- the product table where the price is greater than \$100.*

```
select * from product;  
select product_name , price from product  
where price > 100;
```

*-- Q3 Get the names and email IDs of all customers  
-- from the customers table.*

```
select * from customers;  
select concat(first_name," ",last_name) as full_name, email_id from customers;
```

*-- Q4 Retrieve the details of orders placed on a specific date (e.g., '2024-07-01').*

```
select * from orders;  
select * from orders  
where order_date = "2024-07-1";
```

*-- Q5 List all products with their stock quantity that belong to the 'Electronics'  
category.*

```
select * from product  
where category = "Electronics";
```

*-- Q6 Find the total number of products in each category.*

```
select * from product;  
select category,count(*) as total_number from product  
group by category;
```

*-- Q7 Calculate the average price of all products.*

```
select * from product;  
select avg(price)as avg_price from product;
```

*-- Q8 Get the maximum and minimum price of  
-- products in the 'jeweler' category.*

```
select * from product;  
select min(price)as mini_price,max(price)as max_price from product  
where category = "jeweler" ;
```

*-- Q9 Count the total number of orders placed by each customer.*

```
select * from orders;  
select * from customers;  
select c.customer_id ,count(o.order_id)as number_orders from orders o  
join customers c  
on c.customer_id = o.customer_id
```

```
group by c.customer_id;
```

```
-- Q10 Find the total amount spent on orders by each customer.
```

```
select * from orders ;
```

```
select * from customers;
```

```
select customer_id,sum(total_amount)as spent_amount from orders  
group by customer_id;
```

```
-- Q11 List all orders along with the names of the products
```

```
-- included in those orders.
```

```
select * from order_details;
```

```
select * from product;
```

```
select p.product_id, p.product_name from product p
```

```
join order_details o
```

```
on p.product_id = o.product_id
```

```
group by p.product_id ;
```

```
-- Q12 Get the names and total amount of each order placed by customers.
```

```
select * from orders;
```

```
select * from customers;
```

```
select c.customer_id,concat(c.first_name," ",c.last_name) as full_name, sum(o.total_amount)  
as total_amount from customers c
```

```
join orders o
```

```
on c.customer_id = o.customer_id
```

```
group by c.customer_id;
```

```
-- Q13 Show all order details along with the corresponding product names and order  
quantities.
```

```
select * from order_details;
```

```
select * from product;
```

```
select od.orderdetails_id ,od.product_id ,od.quantity,p.product_name from order_details od
```

```
join product p
```

```
on od.product_id = p.product_id;
```

```
-- Q14 Retrieve products that are included in any orders.
```

```
select * from product;
```

```
select * from order_details;
```

```
select p.product_id,p.product_name from product p
```

```
join order_details od
```

```
on p.product_id = od.product_id;
```

```
-- Q15 Find products with a price higher than the average price.
```

```
select * from product;
```

```
select * from product
```

```
where price > (select avg(price) from product);
```

```
-- Q16 Get customers who have placed orders totaling more than 50,000.
```

```
select * from customers;
```

```
select * from orders;
```

```
select c.customer_id,concat(c.first_name," ",c.last_name)as full_name ,o.total_amount from  
customers c
```

```
join orders o
```

```
on c.customer_id = o.customer_id
```

```
where o.total_amount > 50000;
```

```
-- Q17 List products that have never been ordered.
```



```

select * from product;
select * from order_details;
select * from product
where product_id not in (select product_id from order_details);

-- Q18 Find the customer who has placed the most orders.
select * from customers;
select * from orders;
select c.customer_id,concat(c.first_name," ",c.last_name)as full_name,max(order_id) as
most_order from customers c
join orders o
on c.customer_id = o.customer_id
group by o.order_id
order by most_order
limit 1;

-- Q19 Get products with stock quantities below the average stock quantity.
select * from product;
select * from product
where (stock_quantity)<(select avg(stock_quantity) from product);

-- Q20 Increase the price of all products by 5%.
select * from product;
update product
set price = price * 1.5;
set sql_safe_updates = 0;

-- Q21 List customers who have placed at least one order.
select * from customers;
select * from orders;
select distinct concat(c.first_name," ",c.last_name)as full_name from customers c
join orders o
on c.customer_id = o.customer_id ;

-- Q22 Find products with prices both in 'Electronics' and 'Furniture' categories.
select * from product;
select product_name , price , category from product
where category in ('Electronics','Furniture') ;

-- Q23 Retrieve the most recent 5 orders.
select * from orders
order by order_date desc
limit 5 ;

-- Q24 Get the average order amount per customer.
select * from customers;
select * from orders;
select avg(o.total_amount) as avg_amount, c.first_name, c.last_name from customers c
join orders o
on o.customer_id = c.customer_id
group by c.customer_id;

-- Q26 Find the total number of products ordered per product category.
select * from product;
select * from order_details;
select p.category,sum(od.quantity) as total_quantity from order_details od

```

```
join product p
on od.product_id = p.product_id
group by p.category;

-- Q27 Create a view to display the total spending of each customer.
select * from orders;
create view customer_total_spending as
select customer_id ,sum(total_amount) as
total_spending_customer from orders
group by customer_id;

select * from customer_total_spending;

-- Q28 Get a summary of products and their total sales.
select * from product;
select * from order_details;
select p.product_id,p.product_name,sum(od.quantity)as total_sales from product p
join order_details od
on p.product_id = od.product_id
group by p.product_id ;

-- Q29 Add an index on the price column in the product table.
select * from product;
create index idx_price on product(price);
show index from product;
```