



```
CREATE DATABASE pizzahut;
```

```
CREATE TABLE orders (  
    order_id INT NOT NULL,  
    order_date DATE NOT NULL,  
    order_time TIME NOT NULL,  
    PRIMARY KEY(order_id)  
);
```

```
CREATE TABLE order_details (  
    order_details_id INT NOT NULL,  
    order_id INT NOT NULL,  
    pizza_id TEXT NOT NULL,  
    quantity INT NOT NULL,  
    PRIMARY KEY(order_details_id)  
);
```

```
-- Retrieve the total number of orders placed.
```

```
SELECT  
    COUNT(order_id) AS total_orders  
FROM  
    orders;
```

```
-- Calculate the total revenue generated from pizza sales.
```

```
SELECT  
    ROUND(SUM(order_details.quantity * pizzas.price),  
          2) AS total_sales  
FROM  
    order_details  
    JOIN  
    pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

```
-- Identify the highest-priced pizza.
```

```
SELECT  
    pizza_types.name, pizzas.price  
FROM  
    pizza_types  
    JOIN  
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id  
ORDER BY pizzas.price DESC  
LIMIT 1;
```

-- Identify the most common pizza size ordered.

```
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
    JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

-- List the top 5 most ordered pizza types along with their quantities.

```
SELECT
    pizza_types.name, SUM(order_details.quantity) AS quantity
FROM
    pizza_types
    JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
    JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY quantity DESC
LIMIT 5;
```

-- Join the necessary tables to find the total quantity of each pizza category ordered.

```
SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS quantity
FROM
    pizza_types
    JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
    JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY quantity DESC;
```

-- Determine the distribution of orders by hour of the day.

```
SELECT
    HOUR(order_time), COUNT(order_id) AS order_count
FROM
    orders
GROUP BY HOUR(order_time);
```

-- Join relevant tables to find the category-wise distribution of pizzas.

```
SELECT
    category, COUNT(name)
FROM
    pizza_types
GROUP BY category;
```

-- Group the orders by date and calculate the average number of pizzas ordered per day.

```
SELECT
    ROUND(AVG(quantity), 0) AS avg_pizza_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(order_details.quantity) AS quantity
    FROM
        orders
    JOIN order_details ON orders.order_id = order_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

-- Determine the top 3 most ordered pizza types based on revenue.

```
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
    JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
    JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revenue DESC
LIMIT 3;
```

-- Calculate the percentage contribution of each pizza type to total revenue.

```
SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (SELECT
        ROUND(SUM(order_details.quantity * pizzas.price),
            2) AS total_sales
    FROM
        order_details
        JOIN
        pizzas ON pizzas.pizza_id = order_details.pizza_id) * 100,
    2) AS revenue
FROM
    pizza_types
    JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
    JOIN
    order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY revenue DESC;
```

-- Analyze the cumulative revenue generated over time.

```
SELECT
    order_date,
    SUM(revenue) OVER(ORDER BY order_date) AS cum_revenue
FROM
    (SELECT
        orders.order_date,
        SUM(order_details.quantity * pizzas.price) AS revenue
    FROM
        order_details
    JOIN
        pizzas
    ON
        order_details.pizza_id = pizzas.pizza_id
    JOIN
        orders
    ON
        orders.order_id = order_details.order_id
    GROUP BY
        orders.order_date) AS sales;
```

-- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```
SELECT
    name,
    revenue
FROM
    (SELECT
        category,
        name,
        revenue,
        RANK( ) OVER(PARTITION BY category ORDER BY revenue DESC) AS rn
    FROM
        (SELECT
            pizza_types.category,
            pizza_types.name,
            SUM((order_details.quantity) * pizzas.price) AS revenue
        FROM
            pizza_types
        JOIN
            pizzas
        ON
            pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
            order_details
        ON
            order_details.pizza_id = pizzas.pizza_id
        GROUP BY
            pizza_types.category,
            pizza_types.name) AS a) AS b
WHERE
    rn <= 3;
```