-- To view the data in the tables (all columns)

select \* from order\_details;

select \* from pizzas

select \* from orders

select \* from pizza\_types;



-- To answer the business question, what is the total number of orders placed?

select count(distinct order\_id) as 'Total Orders' from orders;



-- To calculate the total revenue generated from pizza sales.

-- First let’s join the order\_details and pizzas table to see the details

select order\_details.pizza\_id, order\_details.quantity, pizzas.price

from order\_details

join pizzas on pizzas.pizza\_id = order\_details.pizza\_id

-- to get the total revenue

select cast(sum(order\_details.quantity \* pizzas.price) as decimal(10,2)) as 'Total Revenue'

from order\_details

join pizzas on pizzas.pizza\_id = order\_details.pizza\_id

-- To answer the business question, What is the common pizza size ordered?

SELECT

pizzas.size,

COUNT(DISTINCT order\_id) AS 'No of Orders',

SUM(quantity) AS 'Total Quantity Ordered'

FROM

order\_details

JOIN

pizzas ON pizzas.pizza\_id = order\_details.pizza\_id

GROUP BY

pizzas.size

ORDER BY

COUNT(DISTINCT order\_id) DESC;

-- To calculate the top 3 most ordered pizza types based on revenue

SELECT TOP 3

pizza\_types.name,

SUM(order\_details.quantity \* pizzas.price) AS 'Revenue from pizza'

FROM

order\_details

JOIN

pizzas ON pizzas.pizza\_id = order\_details.pizza\_id

JOIN

pizza\_types ON pizza\_types.pizza\_type\_id = pizzas.pizza\_type\_id

GROUP BY

pizza\_types.name

ORDER BY

[Revenue from pizza] DESC;

--INVENTORY MANAGEMENT

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

SELECT

DATEPART(hour, time) AS 'Hour of the day',

COUNT(DISTINCT order\_id) AS 'No of Orders'

FROM

orders

GROUP BY

DATEPART(hour, time)

ORDER BY

[No of Orders] DESC;

--- To answer the business question- Which ingredients are most frequently used and should be stocked more regularly?

-- Step 1: Create a CTE to split the ingredients

WITH IngredientCTE AS (

SELECT

pt.pizza\_type\_id,

pt.name,

LTRIM(RTRIM(value)) AS ingredient

FROM

pizza\_types pt

CROSS APPLY STRING\_SPLIT(pt.ingredients, ',')

)

-- Step 2: Join the split ingredients with order details and calculate usage

SELECT

ic.ingredient,

SUM(od.quantity) AS ingredient\_usage

FROM

IngredientCTE ic

JOIN

pizzas p ON ic.pizza\_type\_id = p.pizza\_type\_id

JOIN

order\_details od ON p.pizza\_id = od.pizza\_id

GROUP BY

ic.ingredient

ORDER BY

ingredient\_usage DESC;

-- To answer the business question-Can we identify any seasonal trends in pizza demand?

--First, we will aggregate the data by month to see the total number of pizzas ordered each month.

SELECT

DATEPART(YEAR, date) AS Year,

DATEPART(MONTH, date) AS Month,

SUM(order\_details.quantity) AS TotalPizzasOrdered

FROM

orders

JOIN

order\_details ON orders.order\_id = order\_details.order\_id

GROUP BY

DATEPART(YEAR, date),

DATEPART(MONTH, date)

ORDER BY

Year, Month;

--Let’s check if we can identify any trends per quarter

SELECT

DATEPART(YEAR, date) AS Year,

DATEPART(QUARTER, date) AS Quarter,

SUM(order\_details.quantity) AS TotalPizzasOrdered

FROM

orders

JOIN

order\_details ON orders.order\_id = order\_details.order\_id

GROUP BY

DATEPART(YEAR, date),

DATEPART(QUARTER, date)

ORDER BY

Year, Quarter;

--Let’s check if we can identify any trends per season (winter, summer, fall, spring)

SELECT

DATEPART(YEAR, date) AS Year,

CASE

WHEN DATEPART(MONTH, date) IN (12, 1, 2) THEN 'Winter'

WHEN DATEPART(MONTH, date) IN (3, 4, 5) THEN 'Spring'

WHEN DATEPART(MONTH, date) IN (6, 7, 8) THEN 'Summer'

WHEN DATEPART(MONTH, date) IN (9, 10, 11) THEN 'Fall'

END AS Season,

SUM(order\_details.quantity) AS TotalPizzasOrdered

FROM

orders

JOIN

order\_details ON orders.order\_id = order\_details.order\_id

GROUP BY

DATEPART(YEAR, date),

CASE

WHEN DATEPART(MONTH, date) IN (12, 1, 2) THEN 'Winter'

WHEN DATEPART(MONTH, date) IN (3, 4, 5) THEN 'Spring'

WHEN DATEPART(MONTH, date) IN (6, 7, 8) THEN 'Summer'

WHEN DATEPART(MONTH, date) IN (9, 10, 11) THEN 'Fall'

END

ORDER BY

Year, Season;

--Customer Preferences

--To answer the business question what are the top 5 most ordered pizza types along with their quantities.

select top 5 pizza\_types.name as 'Pizza', sum(quantity) as 'Total Ordered'

from order\_details

join pizzas on pizzas.pizza\_id = order\_details.pizza\_id

join pizza\_types on pizza\_types.pizza\_type\_id = pizzas.pizza\_type\_id

group by pizza\_types.name

order by sum(quantity) desc

--To answer the business question what is the total quantity of each pizza category ordered

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

select top 5 pizza\_types.category, sum(quantity) as 'Total Quantity Ordered'

from order\_details

join pizzas on pizzas.pizza\_id = order\_details.pizza\_id

join pizza\_types on pizza\_types.pizza\_type\_id = pizzas.pizza\_type\_id

group by pizza\_types.category

order by sum(quantity) desc

--To answer the business question what is the category-wise distribution of pizzas?

select category, count(distinct pizza\_type\_id) as [No of pizzas]

from pizza\_types

group by category

order by [No of pizzas]

--To answer the business question what are the peak hours and days for orders?

SELECT

DATENAME(WEEKDAY, date) AS DayOfWeek,

DATEPART(HOUR, time) AS Hour,

COUNT(order\_id) AS NumberOfOrders

FROM

orders

GROUP BY

DATENAME(WEEKDAY, date),

DATEPART(WEEKDAY, date),

DATEPART(HOUR, time)

ORDER BY

NumberOfOrders DESC;