

PROJECT REPORT:DBMS RESTAURANT MANAGEMENT SYSTEM IN SQL

NAME:MANAS SACHIN DESHMUKH

This project involves creating a database schema for a fictional Pizza Hut restaurant chain, designing tables for orders and order details, and then querying these tables to gather insights about the business operations. Here's a summary of the implementation steps and the insights derived:

1.Database Schema and Tables:

- Created a `pizzahut` database and two primary tables:
 - `orders`: Stores order information including order ID, date, and time.
 - `order_details`: Stores details for each order, linking to `pizzas` through `pizza_id` and recording quantity.

2.Data Queries and Analysis:

- **Total Orders Placed:** Counted total orders placed.

- **Total Sales:** Calculated total sales revenue rounded to two decimal places by joining `order_details` with `pizzas`.
- **Highest Priced Pizza:** Identified the pizza with the highest price.
- **Most Common Pizza Size:** Found the most commonly ordered pizza sizes.
- **Quantity of Each Pizza Category:** Summed quantities of pizzas by category in increasing and decreasing order.
- **Top 5 Most Ordered Pizza Types:** Identified the top 5 most ordered pizza types with their respective quantities.
- **Distribution of Orders by Hour:** Analyzed order distribution by hour of the day.
- **Average Quantity by Pizza Category:** Calculated the average quantity ordered per pizza category.
- **Total and Average Pizzas Ordered Daily:** Grouped orders by date to find total and average pizzas ordered daily.

- **Top and Bottom 3 Most Ordered by Revenue:** Identified pizzas based on revenue contribution.
- **Percentage Contribution by Pizza Type:** Calculated the percentage revenue contribution of each pizza type to total sales based on categories.
- **Cumulative Revenue Over Time:** Analyzed cumulative revenue over time to track business growth.
- **Top 3 Most Ordered Pizza Types by Revenue within Each Category:** Identified the top 3 pizzas ordered based on revenue within each pizza category.

3.Implementation Summary:

- **Objective:** The project aimed to provide insights into the business performance of Pizza Hut, focusing on sales analytics, popular pizza types, ordering trends, and revenue distribution.
- **Tools Used:** SQL queries were extensively used to extract and

manipulate data from the database tables.

- **Insights Gained:** Insights included popular pizza types, revenue contributions, peak ordering times, and cumulative revenue trends, which could inform strategic decisions regarding menu offerings, marketing campaigns, and operational adjustments.

Overall, this project showcases the practical application of SQL in data analysis for a restaurant business, demonstrating how structured data querying can uncover valuable business insights.

MAJOR SQL QUERIES ANSWERED:-

Basic:

Retrieve the total number of orders placed.

Calculate the total revenue generated from pizza sales.

Identify the highest-priced pizza.

Identify the most common pizza size ordered.

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

Intermediate:

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

Determine the distribution of orders by hour of the day.

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

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

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

Advanced:

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

Analyze the cumulative revenue generated over time.

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

*****COMPLETED*****