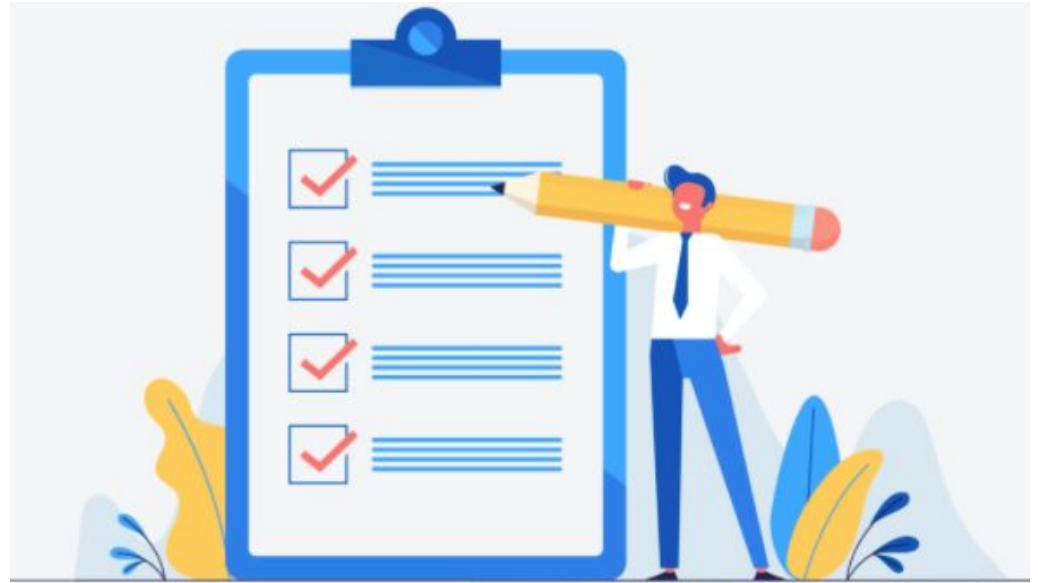# Pizza Delivery Business Report

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Agenda

- **Project Overview**
  - Database Information
  - Pizza Database ERD
  - Breakdown of Tables

- **Query Results**
  - Financials
  - Operations
  - Product
  - Customer

- **Final Recommendations**

Project Overview

Database Information:

- 6 Tables : Pizza, Side, Customer, Employee, Order, and OrderDetail
- Dates: January 2020 - March 2020
- 27 Different Pizzas (3 Sizes, 3 Sauces, and 3 Toppings), 10 sides, 10 employees, 50 customers, 1500 orders

Objective:

- Utilize SQL queries to help answer the important business questions
- Gain insight on business operations, business performance, and customer preferences
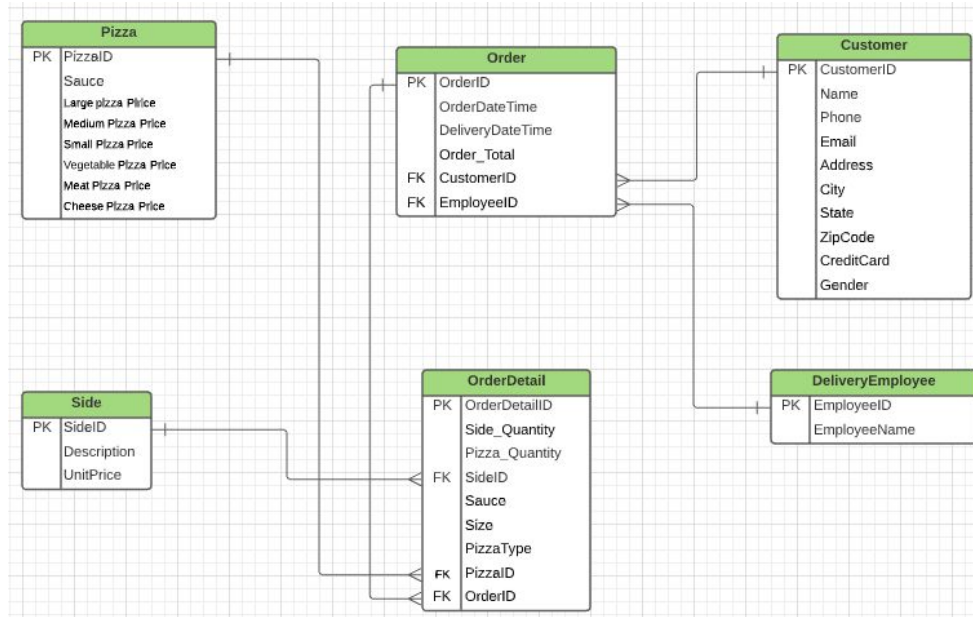
Pizza Database ERD

Table Breakdown

P_Pizza

Column	Data Type	PK	Reference Table	References Table PK
Pizza_ID	INT AUTO_INCREMENT	YES		
Description	Varchar (50)	NO		
Sauce	Varchar (50)	NO		
Large_Pizza_Price	INT	NO		
Medium_Pizza_Price	INT	NO		
Small_Pizza_Price	INT	NO		
Vegetable_Pizza_Price	INT	NO		
Meat_Pizza_Price	INT	NO		
Cheese_Pizza_Price	INT	NO		
Total_Price	INT	NO		

P_Side

Column	Data Type	PK	Reference Table	References Table PK
Side_ID	INT AUTO_INCREMENT	YES		
Description	Varchar (50)	NO		
Unit_Price	INT	NO		

P_Order_Details

Column	Data Type	PK	Reference Table	References Table PK
Order_Detail_ID	INT AUTO_INCREMENT	YES		
Pizza_Quantity	INT (4)	NO		
Side_Quantity	Varchar (50)	NO		
Size	Varchar (50)	NO		
Pizza_Type	Varchar (50)	NO		
Pizza_ID	INT	NO	P_Pizza	Pizza_ID
Side_ID	INT	NO	P_Side	Side_ID
Order_ID	INT	NO	P_Order	Order_ID

P_Customer

Column	Data Type	PK	Reference Table	References Table PK
Customer_ID	INT AUTO_INCREMENT	YES		
Name	Varchar (50)	NO		
Email	Varchar (50)	NO		
Phone	Char(10)	NO		
Address	Varchar (50)	NO		
City	Varchar (50)	NO		
State	Varchar (2)	NO		
Zip_Code	INT (5)	NO		
Credit_Card	Varchar (20)	NO		
Gender	Varchar (2)	NO		

P_Delivery_Employee

Column	Data Type	PK	Reference Table	References Table PK
Employee_ID	INT AUTO_INCREMENT	YES		
Employee_Name	Varchar (50)	NO		

P_Order

Column	Data Type	PK	Reference Table	References Table PK
Order_ID	INT AUTO_INCREMENT	YES		
Order_Date_Time	DateTime	NO		
Delivery_Date_Time	DateTime	NO		
Order_Total	INT	NO		
Customer_ID	INT	NO	P_Customer	Customer_ID
Employee_ID	INT	NO	P_Employee	Employee_ID

FINANCIALS

Sales Report

SELECT MONTH(Order_Date_TIme) AS Month, SUM(Order_Total) AS Monthly_Sales, COUNT(Order_ID) AS
Total_Orders
FROM P_Order
GROUP BY 1

Month	Monthly_Sales	Total_Orders
1	52459	524
2	47619	476
3	51286	500

Monthly Sales Report

SELECT WEEK(Order_Date_TIme), SUM(Order_Total) AS Weekly_Sales,
COUNT(Order_ID) AS Total_Order
FROM P_Order
GROUP BY 1;

Week	Weekly_Sales	Total_Order
0	6494	66
1	12275	118
2	10645	109
3	10741	113
4	14182	134
5	11654	123
6	10733	109
7	11428	111
8	11926	117
9	13157	128
10	11213	108
11	11213	108
12	11373	111
13	4330	45

Weekly Sales Report

Total Orders And Revenue For Each City?

Total_Orders	Revenue	City
424	43305	San Jose
506	51378	Milpitas
570	56681	Santa Clara

```
SELECT COUNT(*) AS Total_Orders, SUM(Order_Total) AS Revenue, c.City
FROM P_Order o, P_Customer c
WHERE o.Customer_ID = c.Customer_ID
GROUP BY 3
ORDER BY 1 ASC;
```

What Day of the Week is the Most Profitable/Busy in March?

Day_Of_Week	Num_Orders	Revenue
Monday	97	9851
Wednesday	72	7653
Sunday	71	6456
Tuesday	69	7263
Saturday	68	7362
Friday	63	6147
Thursday	60	6554

Number of Orders and Revenue - March

```
SELECT  DAYNAME(Order_Date_TIme) AS Day_Of_Week, COUNT(Order_ID) AS
Num_Orders, SUM(Order_Total) As Revenue
FROM P_Order
WHERE MONTH(Order_Date_TIme) = 3
GROUP BY 1
ORDER BY 2 DESC
```

OPERATIONS

Delivery Driver Performance - March

Employee_ID	Employee_Name	Average_DeliveryTime_March
1 [->]	Tandy Harlin	50.0750
9 [->]	Burl Bourgeois	50.6809
3 [->]	Cordie Abdo	51.5424
6 [->]	Herman Nicks	51.8409
4 [->]	Juliet Dennett	51.9394
5 [->]	Micheal Beverage	52.1364
8 [->]	Arline Overfelt	52.7234
2 [->]	Halley Fuller	53.2167
7 [->]	Lorie Hobaugh	55.0488

SELECT o.Employee_ID, e.Employee_Name, AVG(TIMESTAMPDIFF(minute, Order_Date_TIme,
Delivery_Date_TIme)) AS Average_DeliveryTime_March
FROM P_Order o, P_Delivery_Employee e
WHERE o.Employee_ID = e.Employee_ID
AND MONTH(Order_Date_TIme) = 3
GROUP BY 1
ORDER BY 3 ASC;

Employee_ID	Employee_Name	Total_Deliveries_March
4 [->]	Juliet Dennett	66
2 [->]	Halley Fuller	60
3 [->]	Cordie Abdo	59
10 [->]	Natalia Maharaj	52
8 [->]	Arline Overfelt	47
9 [->]	Burl Bourgeois	47
5 [->]	Michael Beverage	44
6 [->]	Herman Nicks	44
7 [->]	Lorie Hobaugh	41
1 [->]	Tandy Harlin	40

SELECT o.Employee_ID, e.Employee_Name, COUNT(*) AS Total_Deliveries_March
FROM
        P_Order o,
        P_Delivery_Employee e
WHERE
        o.Employee_ID = e.Employee_ID
        AND MONTH(Order_Date_TIme) = 3
GROUP BY 1
ORDER BY 3 DESC;

Average Delivery Time   Total Deliveries

What Are The Busiest Hours During The Day?

Hour_Order	Amount_Ordered
13	186
17	184
14	174
15	173
19	166
18	165
12	161
16	133
11	109
20	38
10	11

```
SELECT HOUR(Order_Date_TIme) AS Hour_Order, COUNT(Order_ID) AS Amount_Ordered
FROM P_Order
GROUP BY 1
ORDER BY 2 DESC;
```

Orders by Hour

PRODUCT INSIGHT

Pizza Popularity In The Last Three Months?

Pizza_ID	Amount_Sold	Description
2 [->]	234	Large-Marinara-Meat
4 [->]	207	Medium-Marinara-Veg
26 [->]	201	Small-BBQ-Meat
12 [->]	186	Large-Alfredo-Cheese
9 [->]	185	Small-Marinara-Cheese

Top 5 Pizzas Sold

```
SELECT
        d.Pizza_ID,
        SUM(Pizza_Quantity) AS Amount_Sold,
        p.Description
FROM
        P_Order_Details d,
        P_Pizza p
WHERE
        d.Pizza_ID = p.Pizza_ID
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5;
```

Pizza_ID	Amount_Sold	Description
5 [->]	112	Medium-Marinara-Meat
24 [->]	118	Medium-BBQ-Cheese
27 [->]	122	Small-BBQ-Cheese
10 [->]	125	Large-Alfredo-Veg
8 [->]	147	Small-Marinara-Meat

Bottom 5 Pizzas Sold

```
SELECT
        d.Pizza_ID,
        SUM(Pizza_Quantity) AS Amount_Sold,
        p.Description
FROM
        P_Order_Details d,
        P_Pizza p
WHERE
        d.Pizza_ID = p.Pizza_ID
GROUP BY 1
ORDER BY 2 ASC
LIMIT 5;
```

What Pizza and Side Are Frequently Purchased Together?

Pizza_ID	Side_ID	Items	Times_Purchased_Together
26 [->]	1 [->]	Small-BBQ-Meat, Sprite Bottle	15
12 [->]	2 [->]	Large-Alfredo-Cheese, Coke Bottle	14
16 [->]	1 [->]	Small-Alfredo-Veg, Sprite Bottle	13
2 [->]	2 [->]	Large-Marinara-Meat, Coke Bottle	12
3 [->]	1 [->]	Large-Marinara-Cheese, Sprite Bottle	11
4 [->]	10 [->]	Medium-Marinara-Veg, Vanilla Cake	11
17 [->]	10 [->]	Small-Alfredo-Meat, Vanilla Cake	11
20 [->]	1 [->]	Large-BBQ-Meat, Sprite Bottle	11
19 [->]	6 [->]	Large-BBQ-Veg, Ranch Sauce	11
25 [->]	9 [->]	Small-BBQ-Veg, Chocolate Cake	10

SELECT d.Pizza_ID, d.Side_ID, CONCAT(p.Description,', ', s.Description) AS Items,
COUNT(*) AS Times_Purchased_Together
FROM P_Order_Details d, P_Pizza p, P_Side s
WHERE s.Side_ID = d.Side_ID
AND p.Pizza_ID = d.Pizza_ID
GROUP BY 1,2,3
ORDER BY 4 DESC
LIMIT 10;

Pizza & Side Purchase Frequency

Top 5 Sides Sold?

Side_ID	Amount_Sold	Revenue	Description
1 [->]	561	1122	Sprite Bottle
8 [->]	450	450	Marinara Sauce
9 [->]	447	2682	Chocolate Cake
2 [->]	439	878	Coke Bottle
4 [->]	436	6104	Buffalo Wings

```
SELECT
      d.Side_ID,
      SUM(Side_Quantity) AS Amount_Sold,
   SUM(Side_Quantity) * s.Unit_Price AS Revenue,
      s.Description
FROM
      P_Order_Details d,
      P_Side s
WHERE
      d.Side_ID = s.Side_ID
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5;
```
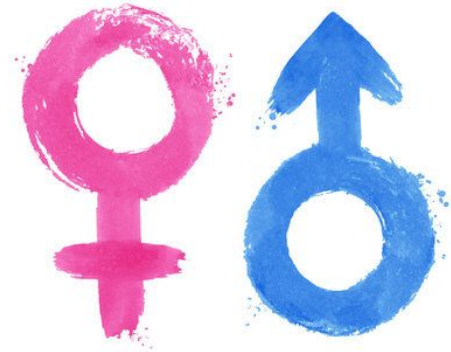
Top 5 Sides Sold W/ Revenue

CUSTOMER INSIGHT

What Does Our Customer Demographic Look Like?

City	Gender	Total
Milpitas	F	10
Milpitas	M	6
San Jose	F	11
San Jose	M	4
Santa Clara	F	11
Santa Clara	M	8

```
SELECT City, Gender, COUNT(*) AS Total
FROM P_Customer
GROUP BY 1, 2
```

Customer Count by City and Gender

Who Are Our Most Frequent Customers?

Name	Total_Orders	Amount_Spent
Lea Marlatt	47	4296
Vernetta Raleigh	37	4109
Winnifred Reiff	38	3893
Rema Pollman	41	3854
Edelmira Vine	33	3657
Maximo Thao	34	3613
Ines Schaller	33	3598
Drew Carrow	35	3549
Rochell Algarin	32	3546
Jenee Damon	36	3539


```
SELECT c.Name, COUNT(o.Order_ID) AS Total_Orders, SUM(o.Order_Total) AS Amount_Spent
FROM P_Customer c, P_Order o
WHERE c.Customer_ID = o.Customer_ID
GROUP BY 1
ORDER BY 3 DESC
LIMIT 10;
```

Frequent Customers and Amount Spent

Most Popular Pizza By Each City?

City	Description	Total_Orders
San Jose	Medium-Marinara-Veg	71
San Jose	Large-BBQ-Meat	70
San Jose	Large-Marinara-Meat	64
San Jose	Medium-Alfredo-Meat	63
San Jose	Small-BBQ-Meat	62

SELECT c.City, p.Description, SUM(d.Pizza_Quantity) AS Total_Orders
FROM P_Customer c, P_Pizza p, P_Order_Details d, P_Order o

WHERE c.Customer_ID = o.Customer_ID
AND p.Pizza_ID = d.Pizza_ID
AND o.Order_ID = d.Order_ID
AND c.City = 'San Jose'
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 5;

San Jose

City	Description	Total_Orders
Santa Clara	Large-Marinara-Meat	93
Santa Clara	Medium-Marinara-Cheese	80
Santa Clara	Small-Alfredo-Meat	79
Santa Clara	Medium-BBQ-Veg	79
Santa Clara	Large-BBQ-Cheese	73

SELECT c.City, p.Description, SUM(d.Pizza_Quantity) AS Total_Orders
FROM P_Customer c, P_Pizza p, P_Order_Details d, P_Order o

WHERE c.Customer_ID = o.Customer_ID
AND p.Pizza_ID = d.Pizza_ID
AND o.Order_ID = d.Order_ID
AND c.City = 'Santa Clara'
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 5;

Santa Clara

City	Description	Total_Orders
Milpitas	Large-Marinara-Cheese	86
Milpitas	Medium-Marinara-Veg	79
Milpitas	Large-Marinara-Meat	77
Milpitas	Large-Alfredo-Cheese	73
Milpitas	Small-BBQ-Meat	72

SELECT c.City, p.Description, SUM(d.Pizza_Quantity) AS Total_Orders
FROM P_Customer c, P_Pizza p, P_Order_Details d, P_Order o

WHERE c.Customer_ID = o.Customer_ID
AND p.Pizza_ID = d.Pizza_ID
AND o.Order_ID = d.Order_ID
AND c.City = 'Milpitas'
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 5;

Milpitas

RECOMMENDATIONS

Recommendations

1) Increase marketing in the city of San Jose to get the volume of orders and revenue to increase
2) Create new promotions to help drive weekend sales and push popular pizza/side pairings
3) Increasing staffing on Mondays and during the hours of 13:00-17:00 to accommodate for a busier schedule
4) Send out special promotions/rewards to top 10 customers to encourage their continued business
5) Juliet Dennett should receive a $100 bonus for most amount of deliveries completed