PIZZA STORE

ANALYSIS USING SQL

PIZZA STORE SALES ANALYSIS USING SQL AND POWER BI

HELLO, I AM RITIK RAHI, AN ASPIRING DATA ANALYST AND A B.SC. MATHEMATICS GRADUATE.

OBJECTIVE:

THE OBJECTIVE OF THIS PROJECT IS TO ANALYZE THE SALES DATA OF A PIZZA STORE TO GAIN INSIGHTS INTO ITS PERFORMANCE AND IDENTIFY AREAS FOR IMPROVEMENT. THIS ANALYSIS HAS BEEN CONDUCTED USING SQL FOR DATA QUERYING AND POWER BI FOR DATA VISUALIZATION.

DATA SOURCE:

THE DATASET USED IN THIS PROJECT IS SIMULATED USING EXCEL FUNCTIONS TO MIMIC THE SALES DATA OF A PIZZA STORE FOR ONE MONTH. RANDOM VALUES FOR QUANTITY AND SALES WERE GENERATED TO SIMULATE A REALISTIC SALES SCENARIO FOR LEARNING PURPOSES.

NOTE:

SINCE THIS DATASET IS NOT REAL, THE TOTAL SALES AMOUNT MAY APPEAR HIGHER THAN USUAL, BUT THE PURPOSE WAS TO PRACTICE SQL QUERIES AND POWER BI VISUALIZATIONS EFFECTIVELY.

TOOLS AND TECHNIQUES USED:

1. SQL:

DATA CLEANING AND TRANSFORMATION.
AGGREGATION FUNCTIONS TO CALCULATE TOTAL SALES, AVERAGE SALES, AND ITEM-WISE PERFORMANCE.
QUERYING DATA FOR DAILY AND MONTHLY TRENDS.

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2. POWER BI:

DATA VISUALIZATION TO CREATE DASHBOARDS SHOWING:
DAILY AND MONTHLY SALES TRENDS.
TOP-PERFORMING PIZZA ITEMS.
CUSTOMER ORDER BEHAVIOR.

LEARNING OUTCOMES:

DEVELOPED SQL SKILLS FOR DATA CLEANING AND ADVANCED QUERYING.
LEARNED TO CREATE INTERACTIVE DASHBOARDS IN POWER BI.
PRACTICED DERIVING MEANINGFUL BUSINESS INSIGHTS EVEN WITH SIMULATED DATA.

FUTURE SCOPE:

THIS PROJECT CAN BE FURTHER IMPROVED BY USING REAL-WORLD SALES DATA TO VALIDATE THE INSIGHTS AND REFINE THE ANALYSIS.

QUESTIONS

BASIC QUESTIONS

1. RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.
2. CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES..
3. FIND THE TOTAL NUMBER OF CUSTOMERS.
4. CALCULATE THE AVERAGE QUANTITY OF PIZZAS ORDERED PER ORDER.
5. RETRIEVE THE TOTAL SALES FOR VEG AND NON-VEG PIZZAS SEPARATELY.
6. FIND THE TOTAL NUMBER OF PIZZAS SOLD (QUANTITY).

INTERMEDIATE QUESTIONS:

1. JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.
2. IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED
3. DETERMINE THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.
4. RETRIEVE THE TOP 3 MOST SOLD PIZZAS BASED ON QUANTITY.

ADVANCED QUESTIONS:

1. CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE (VEG/NON-VEG) TO TOTAL REVENUE.
2. FIND THE PIZZA THAT GENERATES THE HIGHEST REVENUE.
3. CALCULATE THE CONTRIBUTION OF EACH PIZZA (PIZZA ID) TO THE TOTAL REVENUE.

1. RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED

```sql
-- Retrieve the total number of orders placed.
select count(Order_Id) as Total_Orders
from orderdetails
```

	Total_Orders
▶	1314

2. CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

```
1    -- Calculate the total revenue generated from pizza sales.
2 •  Select sum(Final_Amount) as Total_Revenue
3    from orderdetails
```

	Total_Revenue
▶	1111435

3. FIND THE TOTAL NUMBER OF CUSTOMERS.

```sql
--  Find the total number of customers
select count(Customer_Id) as Total_Customer
from customers
```

	Total_Customer
▶	2039

4. CALCULATE THE AVERAGE QUANTITY OF PIZZAS ORDERED PER ORDER.

```sql
-- Calculate the average quantity of pizzas ordered per order.
select round(avg(quantity),0) as Avg_Pizza_Quantity
from orderdetails
```

	Avg_Pizza_Quantity
▶	2

5. RETRIEVE THE TOTAL SALES FOR VEG AND NON-VEG PIZZAS SEPARATELY.

```sql
-- Retrieve the total sales for veg and non-veg pizzas separately.
select category,sum(Final_Amount) as Total_Sales
from pizza
inner join orderdetails
on pizza.Pizza_Id=orderdetails.Pizza_Id
group by category
```

category	Total_Sales
Non-Veg	559845
Veg	551590

6. FIND THE TOTAL NUMBER OF PIZZAS SOLD (QUANTITY).

```sql
-- Find the total number of pizzas sold (quantity).
select sum(Quantity) as Total_Pizza_Sold
from orderdetails
```

	Total_Pizza_Sold
▶	3240

7. JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.

```sql
-- join the necessary tables to find the total quantity of each pizza category ordered.
select Category,sum(Quantity) as Total_Quantity
from pizza
inner join orderdetails
on pizza.Pizza_Id=orderdetails.Pizza_Id
group by Category
```

	Pizza_Name	Total_Quantity
▶	Non-Veg Supreme	363
	Chicken Tikka	355
	Margherita	342

8. IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```sql
-- Identify the most common pizza size ordered.
select Size,count(Size) as Frequency
from pizza
inner join orderdetails
on pizza.Pizza_Id=orderdetails.Pizza_Id
group by Size
order by Frequency desc
limit 1
```

	Size	Frequency
▶	L	453

9. DETERMINE THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

```sql
-- Determine the orders by date and calculate the average number of pizzas ordered per day
select Order_Date,round(avg(Quantity),0) as Avg_Pizza_Ordered
from orders
inner join orderdetails
on orderdetails.Order_Id=orders.Order_Id
group by Order_Date
order by Order_Date
```

Order_Date	Avg_Pizza_Ordered
2015-01-01	2
2015-01-02	2
2015-01-03	2
2015-01-04	3
2015-01-05	2
2015-01-06	3
2015-01-07	2
2015-01-08	2
2015-01-09	3
2015-01-10	3
2015-01-11	3

10. RETRIEVE THE TOP 3 MOST SOLD PIZZAS BASED ON QUANTITY.

```sql
-- Retrieve the top 3 most sold pizzas based on quantity.
Select Pizza_Name,sum(Quantity) as Total_Quantity
from pizza
inner join orderdetails
on pizza.Pizza_Id=orderdetails.Pizza_Id
group by Pizza_Name
order by Total_Quantity desc
limit 3
```

	Pizza_Name	Total_Quantity
▶	Non-Veg Supreme	363
	Chicken Tikka	355
	Margherita	342

11. CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE (VEG/NON-VEG) TO TOTAL REVENUE.

```sql
-- Calculate the percentage contribution of each pizza type (Veg/Non-Veg) to total revenue.
Select Category,
       sum(Final_Amount) as Revenue,
        (sum(Final_Amount) * 100.0/ (select sum(Final_Amount) from orderdetails)) as Percenrage_Contribution
from pizza
inner join orderdetails
on pizza.Pizza_Id=orderdetails.Pizza_Id
group by Category
```

	Category	Revenue	Percenrage_Contribution
▶	Non-Veg	559845	50.37137
	Veg	551590	49.62863

12. FIND THE PIZZA THAT GENERATES THE HIGHEST REVENUE.

```sql
-- Find the pizza that generates the highest revenue.
Select Pizza_Name, SUM(Final_Amount) AS Total_Revenue
FROM pizza
inner join orderdetails ON
pizza.Pizza_ID = orderdetails.Pizza_ID
group by Pizza_Name
order by Total_Revenue DESC
LIMIT 1;
```

	Pizza_Name	Total_Revenue
▶	Chicken Sausage	128910

13. CALCULATE THE CONTRIBUTION OF EACH PIZZA (PIZZA ID) TO THE TOTAL REVENUE.

```sql
-- Calculate the contribution of each pizza(Pizza_ID) to the total revenue.
Select
    od.Pizza_ID,
    SUM(od.Quantity * p.Price) AS Revenue_Per_Pizza,
    (SUM(od.Quantity * p.Price) * 100.0) / (SELECT SUM(od.Quantity * p.Price) FROM orderdetails od inner join pizza p ON od.Pizza_ID = p.Pizza_ID) AS Contribution_Percentage
FROM
    orderdetails od
JOIN
    pizza p
ON
    od.Pizza_ID = p.Pizza_ID
GROUP BY
    od.Pizza_ID
ORDER BY
    Contribution_Percentage DESC;
```

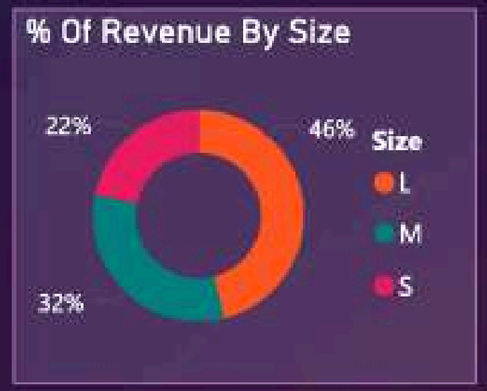
Pizza_ID	Revenue_Per_Pizza	Contribution_Percentage
30	96760	8.70586
15	92000	8.27759
14	66600	5.99225
21	60600	5.45241
29	55890	5.02863
18	53600	4.82259
20	49500	4.45370
27	48000	4.31874
24	46000	4.13879
13	43600	3.92286
26	39960	3.59535
28	37800	3.40101
25	34960	3.14548
12	34500	3.10410
23	33300	2.99613
17	31500	2.83417
19	29100	2.61824
3	27800	2.50127
5	27675	2.49002

PIZZA STORE DASHBOARD

3240	1M	1314	846
Sum of Quantity	Total Revenue	Total Orders	AOV

SALES PERFORMANCE

The HIGHEST pizza sales were recorded on APRIL 22, while the LOWEST sales occurred on APRIL 19 and APRIL 27



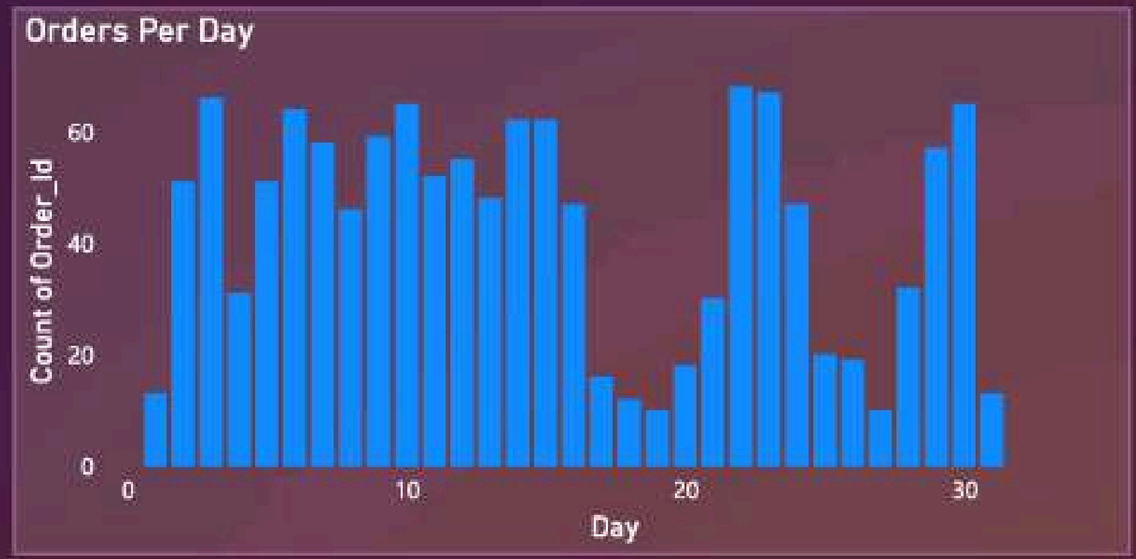
CATEGORIES

Revenue by Size :

The LARGE-sized pizzas generated the highest revenue compared to other sizes, indicating their popularity among customers.

Revenue by Category :

The NON-VEG pizzas outperformed vegetarian pizzas in terms of revenue, showcasing a higher preference for non-veg options.



BEST SELLER

REVENUE :
The highest revenue-generating pizza is **VEG COMBO** bringing in a total of **202200 RS.**

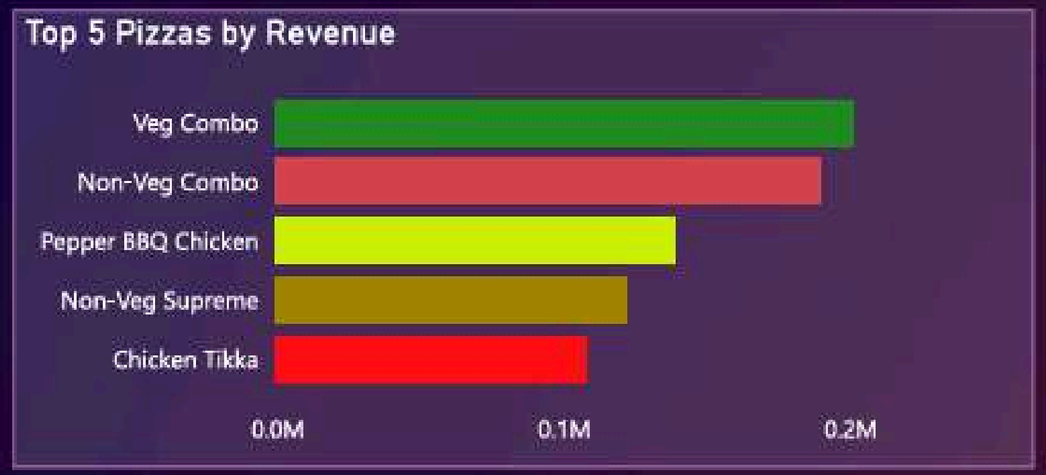
QUANTITY:
The most popular pizza by quantity is **NON-VEG SUPREME**, with a total of **363** sold.

CUSTOMER :
The top customer by quantity is **ADITYA**, purchasing a total of **57** item.
Also the top customer by revenue is **ADITYA** contributing the highest revenue with a total of **23,965 RS.**

2039
Count of Customer...

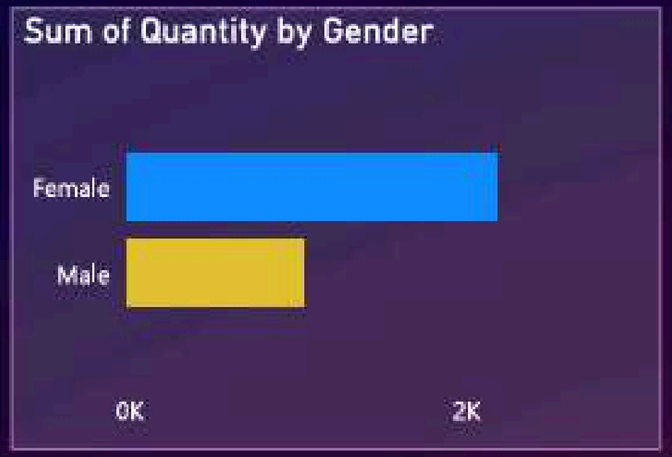
Pizza_Name
- [ ] Chicken Sausage
- [ ] Chicken Tikka
- [ ] Farmhouse
- [ ] Margherita

30
Count of Pizza_Id

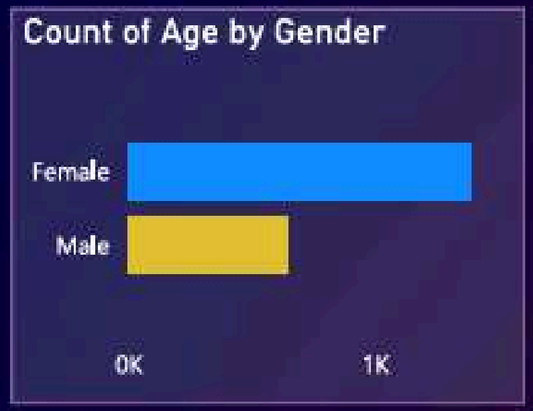


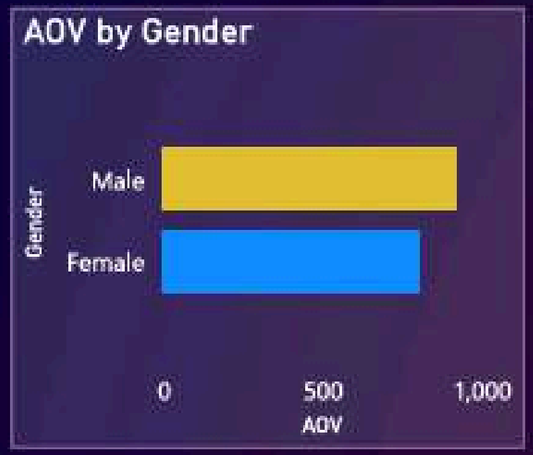

Quantity
1
2
3
4

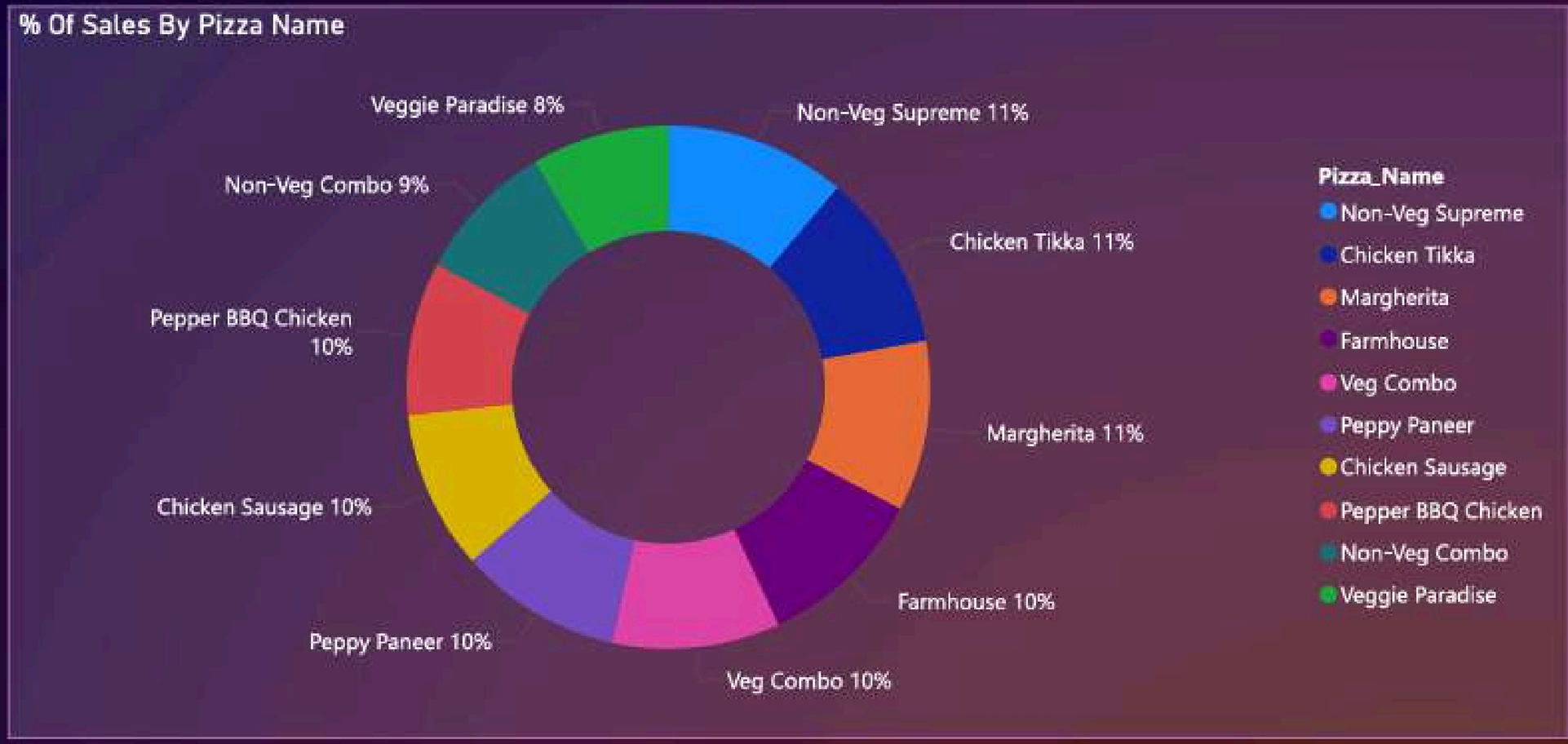

Gender
Female
Male


Sum of Quantity by Gender
Female
Male
0K
2K


Total Revenue by Gender
Female
Male
0.0M
0.5M
Total Revenue


Count of Age by Gender
Female
Male
0K
1K


AOV by Gender
Gender
Male
Female
0
500
1,000
AOV


% Of Sales By Pizza Name
Veggie Paradise 8%
Non-Veg Supreme 11%
Non-Veg Combo 9%
Chicken Tikka 11%
Pepper BBQ Chicken 10%
Margherita 11%
Chicken Sausage 10%
Farmhouse 10%
Peppy Paneer 10%
Veg Combo 10%
Pizza_Name
Non-Veg Supreme
Chicken Tikka
Margherita
Farmhouse
Veg Combo
Peppy Paneer
Chicken Sausage
Pepper BBQ Chicken
Non-Veg Combo
Veggie Paradise

THANK YOU!