

## SECTION 1: Most popular combinations (SQL)

## SECTION 2: Defining and analyzing KPIs using dashboards (Power BI)

### SECTION 1:

The goal of this section is to find the 3 most popular combinations of different items that customers buy in order to advertise new Medium sized combo deals that will yield higher revenue for the upcoming quarters..

The data was downloaded from this folder:

[https://drive.google.com/drive/folders/17U0ah6Q4MJM\\_wln\\_XI4fHc-1fO6Q4s6z](https://drive.google.com/drive/folders/17U0ah6Q4MJM_wln_XI4fHc-1fO6Q4s6z).

#### 1. Import the transaction record into SSMS.

- SELECT \*  
FROM [Pizza DB].[dbo].[pizza\_sales]
- 

1	2	3	4	5
1	1	hawaiian_m	1	2015-01-01 11:36:36.0000000
2	2	classic_dbr_m	1	2015-01-01 11:57:40.0000000
3	3	five_cheese_l	1	2015-01-01 11:57:40.0000000
4	4	ital_supr_l	1	2015-01-01 11:57:40.0000000
5	5	mexicana_m	1	2015-01-01 11:57:40.0000000
6	6	thai_chn_l	1	2015-01-01 11:57:40.0000000
7	7	ital_supr_m	1	2015-01-01 12:12:28.0000000
8	8	prsc_argla_l	1	2015-01-01 12:12:28.0000000
9	9	ital_supr_m	1	2015-01-01 12:16:31.0000000
10	10	ital_supr_m	1	2015-01-01 12:21:30.0000000
11	11	bbq_chn_s	1	2015-01-01 12:29:36.0000000
12	12	the_greek_s	1	2015-01-01 12:29:36.0000000
13	13	spinach_supr_s	1	2015-01-01 12:50:37.0000000
14	14	spinach_supr_s	1	2015-01-01 12:51:57.0000000
15	15	classic_dbr_s	1	2015-01-01 12:52:01.0000000
16	16	green_garden_s	1	2015-01-01 12:52:01.0000000
17	17	ital_cpdo_l	1	2015-01-01 12:52:01.0000000
18	18	ital_supr_l	1	2015-01-01 12:52:01.0000000
19	19	ital_supr_s	1	2015-01-01 12:52:01.0000000
20	20	mexicana_s	1	2015-01-01 12:52:01.0000000
21	21	spicy_ital_l	1	2015-01-01 12:52:01.0000000
22	22	spicy_pesto_l	1	2015-01-01 12:52:01.0000000

C. Query executed successfully.

- We will now count the amount of time customers order different combinations of pizzas. From this result, we will make combo deals for “The Hawaiian Pizza & The Thai Chicken Pizza”, “The Barbecue Chicken Pizza & The Pepperoni Pizza”, and “The Pepperoni Pizza & The Thai Chicken Pizza”.

#### a.

```
SELECT TOP(3) a.pizza_name, b.pizza_name,
COUNT(*) CombinationCount
FROM [Pizza DB].[dbo].[pizza_sales] a
INNER JOIN [Pizza DB].[dbo].[pizza_sales] b
ON a.order_id = b.order_id
AND a.pizza_name < b.pizza_name
GROUP BY a.pizza_name, b.pizza_name
ORDER BY CombinationCount DESC
```

	pizza_name	pizza_name	CombinationCount
1	The Hawaiian Pizza	The Thai Chicken Pizza	319
2	The Barbecue Chicken Pizza	The Pepperoni Pizza	308
3	The Hawaiian Pizza	The Pepperoni Pizza	299

b.

3. Now, firstly, we will create a table and add the names for the 3 combos.

a.

```
CREATE TABLE combo (
    "Combo Names" VARCHAR(40)
)
```

Results	Messages
Combo Names	

b.

c.

```
INSERT INTO dbo.combo
VALUES ('The Hawaiian & Thai Chicken Pizza Combo'),
      ('The Barbecue Chicken & Pepperoni Pizza Combo'),
      ('The Pepperoni & Thai Chicken Pizza Combo')
```

Results	Messages
Combo Names	
1	The Hawaiian & Thai Chicken Pizza Combo
2	The Barbecue Chicken & Pepperoni Pizza Combo
3	The Pepperoni & Thai Chicken Pizza Combo

d.

4. In addition, the combo deals will receive a 20% discount from the total if they were to be purchased individually. Let's find the original prices for those medium-sized pizzas.

a.

```
SELECT DISTINCT pizza_name_id, unit_price
FROM [Pizza DB].[dbo].[pizza_sales]
```

```
WHERE pizza_name IN ('The Hawaiian Pizza', 'The Thai Chicken Pizza'
, 'The Barbecue Chicken Pizza', 'The Pepperoni Pizza')
AND RIGHT(pizza_name_id,2) = '_m'
ORDER BY pizza_name_id
```

	pizza_name_id	unit_price
1	bbq_ckn_m	16.75
2	hawaiian_m	13.25
3	pepperoni_m	12.5
4	thai_ckn_m	16.75

b.

5. We will now sum up the prices for the items individually and apply the 20% discount to the newly created combos. Here, we used the CTE from the previous step in order to get the unit price for each pizza.

a.

```
WITH price AS
(
    SELECT DISTINCT pizza_name_id, unit_price
    FROM [Pizza DB].[dbo].[pizza_sales]
    WHERE pizza_name IN ('The Hawaiian Pizza', 'The Thai Chicken
Pizza'
, 'The Barbecue Chicken Pizza', 'The Pepperoni Pizza')
    AND RIGHT(pizza_name_id,2) = '_m'
),
combi_price AS
(
    SELECT SUM(unit_price) * 0.80 combo_price
    FROM price WHERE pizza_name_id IN ('hawaiian_m',
'thai_ckn_m')
    UNION ALL
    SELECT SUM(unit_price) * 0.80
    FROM price WHERE pizza_name_id IN ('bbq_ckn_m',
'pepperoni_m')
    UNION ALL
    SELECT SUM(unit_price) * 0.80
    FROM price WHERE pizza_name_id IN ('pepperoni_m',
'thai_ckn_m')
)
SELECT * FROM combi_price
```

Results		Messages
	combo_price	
1	24	
2	23.4	
3	23.4	

b.

## SECTION 2:

The purpose of this section is to identify KPIs and visualize product performance throughout the year before strategizing data-driven business decisions for next in order to increase revenue.

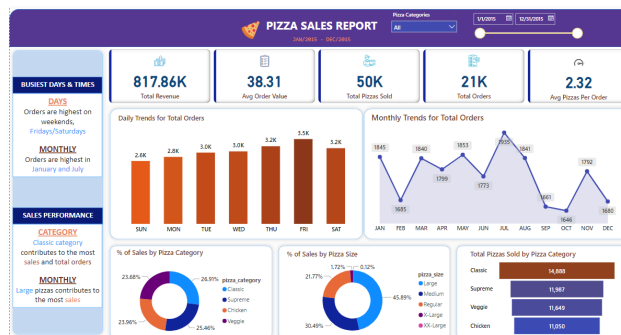
1. After uploading the file to Power BI, we cleaned the data in Power Query.

Table: SelectRows(\*Replaced Values\*, each true)

id	id pizza_name_id	quantity	order_date	order_time
1	1 hawaiian_m	1	1/1/2015	12/1
2	2 classic_dla_m	1	1/1/2015	12/1
3	3 five_cheese_l	1	1/1/2015	12/1
4	4 ital_supr_l	1	1/1/2015	12/1
5	5 mexicana_m	1	1/1/2015	12/1
6	6 thai_chn_l	1	1/1/2015	12/1
7	7 ital_supr_m	1	1/1/2015	12/1
8	8 prsc_argla_l	1	1/1/2015	12/1
9	9 ital_supr_m	1	1/1/2015	12/1
10	10 ital_supr_m	1	1/1/2015	12/1
11	11 bbq_chn_s	1	1/1/2015	12/1
12	12 the_greek_s	1	1/1/2015	12/1
13	13 spinach_supr_s	1	1/1/2015	12/1
14	14 spinach_supr_s	1	1/1/2015	12/1
15	15 classic_dla_s	1	1/1/2015	12/1
16	16 green_garden_s	1	1/1/2015	12/1
17				

a.

2. We then chose the KPIs and examined them closely by product categories and certain time frames throughout the year by implementing interactive filters on the dashboard.



a.

