

-- Exercise 1

```
WITH cte AS (  
  SELECT o.order_id  
         ,o.date  
         ,sum(od.quantity * p.price) AS order_price  
  FROM orders o  
  JOIN order_details od ON o.order_id = od.order_id  
  JOIN pizzas p ON od.pizza_id = p.pizza_id  
  WHERE date = '2015-02-18'  
  GROUP BY o.order_id, o.date )  
  
  SELECT date  
         ,AVG(order_price) AS avg_order_price  
  FROM cte  
  GROUP BY date
```

	date	avg_order_price
1	2015-02-18	43.325409

-- Exercise 2

```
SELECT o.order_id  
FROM orders o  
JOIN order_details od ON o.order_id = od.order_id  
JOIN pizza_types pt ON LEFT(od.pizza_id, LEN(od.pizza_id) - 2) = pt.pizza_type_id  
WHERE MONTH(date) = 3 AND YEAR(date) = 2015  
GROUP BY o.order_id  
HAVING STRING_AGG(ingredients, ',') NOT LIKE '%Pineapple%'
```

	order_id
1	3531
2	3532
3	3533
4	3534
5	3535
6	3536
7	3539
8	3540
9	3541
10	3542
11	3543
12	3544
13	3545
14	3547
15	3548

-- Exercise 3

```
WITH cte AS (  
  SELECT o.order_id  
         ,o.date  
         ,sum(od.quantity * p.price) AS order_price  
  FROM orders o  
  JOIN order_details od ON o.order_id = od.order_id  
  JOIN pizzas p ON od.pizza_id = p.pizza_id  
  WHERE MONTH(date) = 2  
  GROUP BY o.order_id, o.date )  
  
  SELECT TOP (10)  
         order_id  
         ,order_price  
         ,RANK () OVER (ORDER BY order_price DESC) AS rank_price  
  FROM cte
```

	order_id	order_price	rank_price
1	2675	254.50	1
2	2075	249.80	2
3	2126	238.00	3
4	3187	238.00	3
5	2612	237.50	5
6	3292	233.70	6
7	3473	230.25	7
8	2725	226.25	8
9	2000	223.70	9
10	1957	218.50	10

-- Exercise 4

```

WITH cte AS (
SELECT  o.order_id
        ,sum(od.quantity * p.price) AS order_amount
        ,o.date
FROM    orders o
JOIN    order_details od ON o.order_id = od.order_id
JOIN    pizzas p ON od.pizza_id = p.pizza_id
GROUP BY o.order_id, o.date )

SELECT  order_id
        ,order_amount
        ,AVG(order_amount) OVER (PARTITION BY MONTH(date)) AS average_month_amount
        ,date
FROM    cte

```

	order_id	order_amount	average_month_amount	date
1	1566	40.50	37.828346	2015-01-27
2	46	58.00	37.828346	2015-01-01
3	215	12.00	37.828346	2015-01-04
4	1397	18.50	37.828346	2015-01-24
5	1520	37.50	37.828346	2015-01-26
6	1443	25.75	37.828346	2015-01-24
7	1735	16.75	37.828346	2015-01-30
8	1689	20.25	37.828346	2015-01-29
9	169	46.20	37.828346	2015-01-03
10	1105	53.75	37.828346	2015-01-19
11	507	12.75	37.828346	2015-01-09
12	1812	36.25	37.828346	2015-01-31
13	630	12.25	37.828346	2015-01-11
14	338	66.50	37.828346	2015-01-06
15	1228	28.75	37.828346	2015-01-21
16	736	30.50	37.828346	2015-01-12
17	876	44.00	37.828346	2015-01-15
18	1045	16.75	37.828346	2015-01-18

-- Exercise 5

```

SELECT  count(order_id)
        ,date
        ,DATEPART(hour, time) AS hour
FROM    orders
WHERE   date = '2015-01-01'
GROUP BY date, DATEPART(hour, time)

```

	count_orders	date	hour
1	2	2015-01-01	11
2	7	2015-01-01	12
3	10	2015-01-01	13
4	7	2015-01-01	14
5	7	2015-01-01	15
6	4	2015-01-01	16
7	8	2015-01-01	17
8	8	2015-01-01	18
9	6	2015-01-01	19
10	5	2015-01-01	20
11	2	2015-01-01	21
12	3	2015-01-01	22

-- Exercise 6

```

SELECT  name
        ,category
        ,COUNT(o.order_id) AS count_orders
FROM    orders o
JOIN    order_details od ON o.order_id = od.order_id
JOIN    pizza_types pt ON LEFT(od.pizza_id, LEN(od.pizza_id) - 2) = pt.pizza_type_id
WHERE   MONTH(date) = 1 AND YEAR(date) = 2015
GROUP BY name, category

```

	name	category	count_orders
1	The Classic Deluxe Pizza	Classic	189
2	The Chicken Alfredo Pizza	Chicken	83
3	The Pepper Salami Pizza	Supreme	128
4	The Spinach Pesto Pizza	Veggie	76
5	The Spicy Italian Pizza	Supreme	147
6	The Sicilian Pizza	Supreme	186
7	The Italian Capocollo Pizza	Classic	122
8	The Calabrese Pizza	Supreme	66
9	The Pepperoni Pizza	Classic	235
10	The Four Cheese Pizza	Veggie	153
11	The Barbecue Chicken Pizza	Chicken	206
12	The Greek Pizza	Classic	76
13	The Thai Chicken Pizza	Chicken	197
14	The Southwest Chicken Pizza	Chicken	135
15	The California Chicken Pizza	Chicken	197
16	The Spinach Supreme Pizza	Supreme	87

-- Exercise 7

```

SELECT  size
        ,COUNT(o.order_id) AS count_orders
FROM    orders o
JOIN    order_details od ON o.order_id = od.order_id
JOIN    pizzas p ON od.pizza_id = p.pizza_id
WHERE   (MONTH(date) = 2 OR MONTH(date) = 3) AND YEAR(date) = 2015
GROUP BY size

```

	size	count_orders
1	S	2392
2	L	3120
3	XL	79
4	XXL	6
5	M	2481