

# Programming Exercise 03

## Joins and Subqueries

### T-SQL Fundamentals

Your deliverable should be a plain text file that contains a header showing your name, the name of the assignment, and the date. The body of the text file should echo the SQL statement you use to complete each step of the exercise and the results of the query.

1. Using SQLite and the Northwind database, create a line item report that contains a line for each product in the order with the following columns: the order id, the product id, the unit price, the quantity sold, the line item price, and the percent of that line item constitutes of the total amount of the order.

Here is a sample of the output, limited to 25 records:

OrderID	ProductID	UnitPrice	Quantity	LineTotal	PctOfTotalOrder
10248	11	14.0	12	168.0	38.18
10248	42	9.8	10	98.0	22.27
10248	72	34.8	5	174.0	39.55
10249	14	18.6	9	167.4	8.98
10249	51	42.4	40	1696.0	91.02
10250	41	7.7	10	77.0	4.25
10250	51	42.4	35	1484.0	81.85
10250	65	16.8	15	252.0	13.9
10251	22	16.8	6	100.8	15.03
10251	57	15.6	15	234.0	34.88
10251	65	16.8	20	336.0	50.09
10252	20	64.8	40	2592.0	69.49
10252	33	2.0	25	50.0	1.34
10252	60	27.2	40	1088.0	29.17
10253	31	10.0	20	200.0	13.84
10253	39	14.4	42	604.8	41.86
10253	49	16.0	40	640.0	44.3
10254	24	3.6	15	54.0	8.64
10254	55	19.2	21	403.2	64.49
10254	74	8.0	21	168.0	26.87
10255	2	15.2	20	304.0	12.21
10255	16	13.9	35	486.5	19.53
10255	36	15.2	25	380.0	15.26
10255	59	44.0	30	1320.0	53.0
10256	53	26.2	15	393.0	75.9

2. I want to know the unique (distinct) cities, regions, and postal codes: (a) where we have both customers and employees, (b) where we have customers but no employees AND both customers and employees, and (c) where we have employees but no customers AND both customers and employees. Write three queries, using inner and outer joins. Report the results of the queries. There is no need for any further reporting.
3. Using subqueries, create a report that lists the ten most expensive products.

4. Using subqueries, create a report that shows the date of the last order by all employees.
5. Using subqueries, create a line item report that contains a line for each product in the order with the following columns: the order id, the product id, the unit price, the quantity sold, the line item price, and the percent of that line item constitutes of the total amount of the order.