Programming Exercise 03
Joins and Subqueries

T-SQL Fundamentals

Your deliverable should be a plain text file (`.txt`) 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 ad 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.