INFO90002 S2 2021
Assignment 2 - SQL

Assignment 2 – SQL

Date Due: 0900H (9.00 a.m.) AEST Wednesday 29th September 2021

Submission: Via LMS https://lms.unimelb.edu.au

Weighting: 10% of your total assessment.(Graded out of 200 marks)

St Clemens's Grocery

St Clemens's Grocery is a grocery store that specialises in fresh produce delivery (primarily fruit and vegetables) to local restaurants ('trade') in the Brunswick, Carlton, Parkville, Coburg and Essendon area. During the Covid19 pandemic they also branched out into contactless delivery for residential ('retail') customers.
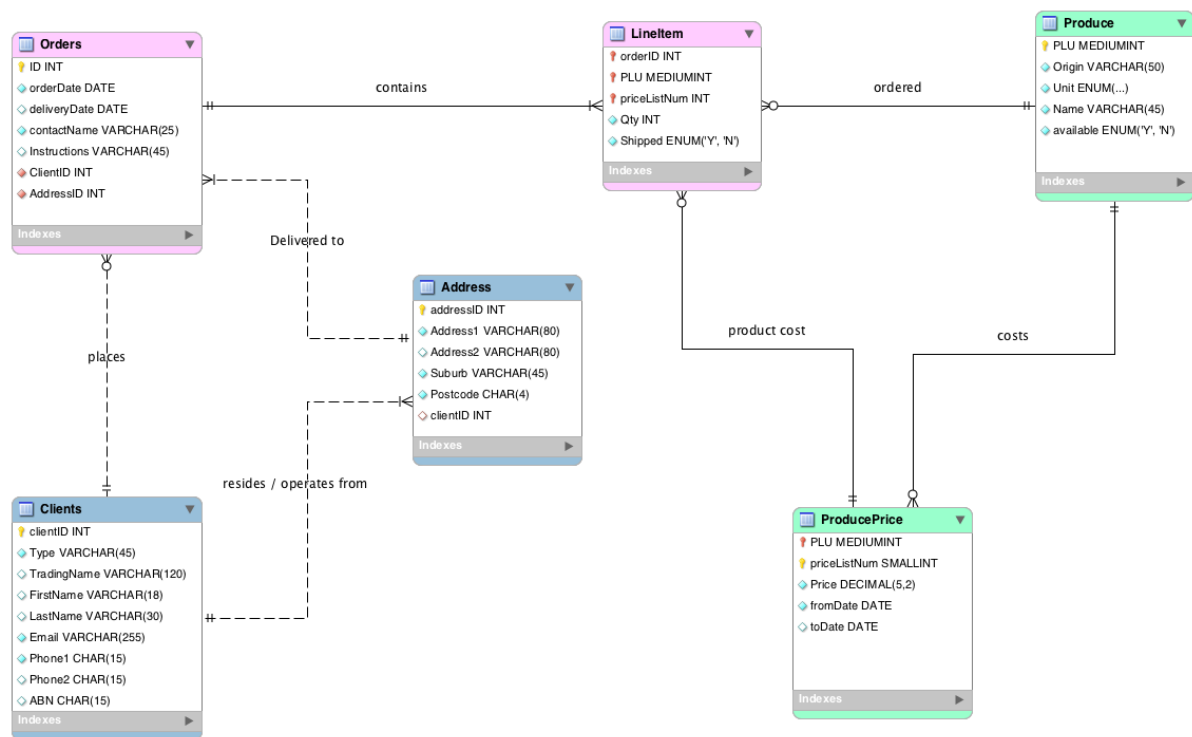

Figure 1. The St Clemens's Grocery Store Data Model

Questions

Write a single SQL statement to answer the following questions. Do not use inline views / schema on read, views unless explicitly instructed to do so. Views inline views and schema on read for Q1-Q9 will earn 0 marks.

1. List all produce that is currently available to order. List the name and price. List the result by produce name in alphabetical order.

   (10 marks)

2. List all produce that has four or more different prices (exclude produce that is not available)

   (10 marks)

3. List the number of orders for each month of each year. Order the result by month then year.

   (10 marks)

4. List all clients who placed an order in one month and received the produce in a different month. Be sure to eliminate duplicates from your result set.

   (15 marks)

5. List the name of the produce that has *never* been available to order.

   (30 marks)

6. List the name of the produce that has *always* been available to order but has never been ordered.

   (30 marks)

7. List the order number, full client name and amount charged which needs to be refunded for produce ordered but not shipped

   (20 marks)

8. List all trade customers who have ordered less than 10 orders in 2020. Order the by trade name in alphabetical order.

   (15 marks)

9. List the total cost of all orders for all trade clients excluding produce not shipped

   (20 marks)

10.

    a. Write the SQL DDL to create a view that lists the client name, month name, order count per month, order cost per month

    (20 marks)

    b. Using the View you created in Task 10a, write a query to identify who placed the highest in order cost, and the highest in order count in the month of January 2021

    (20 marks)

Submission Details:

Submit a single PDF showing your answers to all questions to the Assessment page on LMS by :
0900H (9.00 a.m.) AEST Wednesday 29ᵗʰ September 2021

Formatting requirements for your submission

For each question, present an answer in the following format:

- Show the question number and question in **black** text.

- Show your answer (the SQL statement) in **blue** text **(DO NOT use a screen shot)**

- Show a screenshot of the result from Workbench displaying <u>10 or fewer</u> lines.

- Show how many rows were actually returned, in **red** text.

- Show each query on a separate page.

- You must not use in-line views, schema on read, views for questions unless explicitly instructed to do so (Q10A only).

Example:

Q.XX List all produce that currently costs more than $15. List the produce name, price and unit

```
SELECT name, price, unit
FROM produce
WHERE price > 15.00;
```

name	price	unit
► Garlic	21.99	kg
Ginger	32.95	kg
Snow peas	16.95	kg
Sugar snaps	16.95	kg
WA Brussel sprouts	16.95	kg
Jalapeno Chilli	16.65	kg
Portabello Mushrooms	15.95	kg
Birdseye Chilli	29.00	kg

8 Rows returned

IMPORTANT: ATTEMPT EVERY QUESTION!

GOOD LUCK!

APPENDIX A. St Clemens's Business Rules

Price Lists

St Clemens's update their price list regulary. While fruit and vegetable produce may come in and out of the season, the price list does not change. The same 142 items of produce are always listed on the price list. The currently available produce is available in the *Produce* table. If the available flag is set to 'N' then the produce is not currently available to order.

The *ProducePrice* table stores the all price lists including for currently available produce. The only way to identify if produce was not available for a previous period is that its price is set to NULL (empty).

To date there have been 7 price list periods (indicated by the column *pricelistnum* in the ProducePrice table) from August 2020 until February 2021. Some produce stays the same price year round whereas some other produce prices change as it comes into (and out of) the standard Australian growing season. It is important when writing queries using previous orders or time periods you ensure the correct price is applied to previous orders.

Clients

Clients can be retail or trade. Retail clients do not have an ABN (Australian Business Number) nor do they have a trading name. Clients can be in St Clemens's grocery system but have never placed an order.

APPENDIX B. Sample Marking Schema

In this sample marking rubric Questions 1 and 2 are each worth 1 mark on the assignment but are marked out of 10. You will notice that the result is worth 20% of the available mark. Please attempt every question. The approach is as important as the result.

Q1 (10)	SELECT (2)	FROM (2)	JOIN (4)	RESULT (2)	Q2 (10)	SELECT (2)	FROM + JOIN (2)	GROUP BY (2 marks)	ORDER BY (2 marks)	RESULT (2 marks)
	first_name, last_name, job_title, dept_name 0.5 marks each	staff departments 1 mark each	LEFT | RIGHT OUTER JOIN 4 - correct 3 - natural join | inner jon 2 - left | right join without OUTER ; incorrect join condition 1 - Cartesian or any other join	118 rows Kimberly Grant must be in the set 2 correct 0 other		country_name (1 mark) count(staff_id) (2 marks) (alias ok too)	INNER JOIN | NATURAL JOIN 2 marks outer joins for no staff 1 mark			correct order (1 marks) incorrect order unordered but correct data (0 marks) incorrect result; no result

Any questions? Check the Assignment 2 LMS Ed Discussion forum for suggestions and hints.

RELEASE	Release Date	Comments (if any)
v1 Draft.	1-Sep-2021	Intial release. Draft to INFO90002 staff
v2 Draft	1 Sep 2021	Implemented agreed data model changes based on INFO90002 staff feedback
v3 Final	9 Sep 2021	Included St Clemens's business rules in Appendix A