

## Assignment Part 2: Designing a Database for Kakadu Kitchen

### Aims

- To analyse and comprehend a given ER diagram and Relational Database schema
- To implement a database based on the given ER diagram and Database schema
- To insert appropriate data into the database
- To write required SQL statements to query the database
- To write SQL statements to manipulate the data in the database

### Learning Objectives

In the process of this assessment task you will:

- plan, schedule & execute project tasks to improve your personal/group productivity;
- gain awareness of the typical challenges related to the practical implementation of databases;
- learn how to use Data Definition statements to implement a database from a given ER diagram and the corresponding Database schema; and
- learn how to use Data Manipulation statements to query a database, and insert and update data in the tables

Due date:	<b>Week 11, 3 October Friday, 5:00 PM</b> Submit the individual work file, named 'a2-<GroupID>.zip', by the above due date.
Late submission:	Any submission after the due date will receive a deduction of <b>5% per calendar day</b> . Standard university policy will apply for all late submissions. See the course website/profile for detail.
Marks:	Group submission: a total 100 marks and it is <b>worth 10%</b> out of the total assessment.
Extensions:	An extension will only be <b>considered</b> with supporting documentation from a health professional <b>and</b> if the problem/illness occurred <b>within the week prior to the due date</b> . If an extension is granted the extension will then equal the number of days specified on the doctor's certificate, with a <u>maximum limit of seven (7) calendar days</u> .
Authorship:	This assignment is a <b>Group assignment</b> , and it shall be completed by <b>the students in each group</b> only. The final submission must be identifiably the work of the individual group members. Breaches of this requirement will result in an assignment not being accepted for assessment and may result in the offending student or students being required to present before the Disciplinary Committee.

## Assignment Specification

The Kakadu Kitchen now requires a partial implementation of the design made in Assignment Part 1. To keep consistency between the assignments, database specification containing the ER diagram, the corresponding schema and the input data are provided with this document. You should create your database according to this documentation. Make sure that your implementation is consistent with this design, i.e., your table names, field names, and data types are according to the specifications provided in this document. The implementation phase includes writing SQL statements to create a database and its tables, populating the tables with appropriate test data, and writing several queries to create reports that can be used by the management team. You must insert the data provided with this document.

## Implementation of the Database and Manipulation of the Data

You are required to perform the followings tasks:

1. **Task 1:** Create a text file named `Create_<GroupID>.sql` or `Create_<GroupID>.txt` (for example, `Create_11.sql` or `Create_11.txt`) that will contain SQL statements to:
  - I. Create a database named `KKitchen_<GroupID>`.
  - II. Create all the tables for the database according to the Database schema given with this document (separately attached).
2. **Task 2:** Create a text file named `Insert_<GroupID>.sql` or `Insert_<GroupID>.txt` that will contain SQL statements to:
  - I. Insert all the input data (provided) in each of the tables. These data inserted into the table ensure that each of the queries, specified in Task 3, outputs at least one record.
3. **Task 3:** Create a text file named `Query_<GroupID>.sql` or `Query_<GroupID>.txt` that will contain all the queries to display the following:
  - I. List all partners showing their name, phone number and full address.
  - II. Find all products that Kakadu Kitchen produces itself (i.e., without being in a partnership).
  - III. The date on which the 2nd oldest partnership has been formed. Show the date (e.g., 23-12-2023) and total investment (e.g., \$230,000) in this partnership.
  - IV. Under each product name (e.g., Akuna Springs) there maybe multiple products depending on product types, sources, packaging or unit amount. Find the product names which have more than 3 products. Show product names and total number of products for each.
  - V. Find all products of limited editions which are not available in the market yet. Show such products, their types, unit amount and unit price. Note if there is no delivery of a particular product yet, the product is assumed to be not available in the market. Also, the data in the ProductType table show that there are currently 3 products of type limited editions.
  - VI. Find the partnerships where there are 2 different partners of **Kakadu Kitchen**. Show partnership IDs, partner IDs and names.
  - VII. Find the products (i.e., product number) which are agreed to produce, supply or sell in more than one partnership, where at least one partner is involved other than Kakadu Kitchen. Show product number, number of partnerships, total units of products agreed, and total units delivered so far.

- VIII. Find the total sale share (in \$) so far for the partner 'First Nations-owned company' in each product they invested in. Show partnership number, product number, product name, total unit agreed to sell, total unit sold so far and their sale share in \$ in each product.

**Additional queries for 7003ICT students only:**

- IX. Find the investments of Kakadu Kitchen in all partnerships. For each partnership, show partnership ID, start date (e.g., 13 June 2024), number of total partners including Kakadu Kitchen and the amount of Kakadu investment. Note: for each partnership, subtract the total investment of all other partners from the total investment to find the investment of Kakadu Kitchen.
- X. Find the products which Kakadu Kitchen produces in partnerships only (i.e., not itself). For each product, show the partnership number, product number, name, packaging description, unit amount and price, total amount agreed to produce and total amount so far produced.
4. **Task 4:** Create a text file named `Update_<GroupNumber>.sql` or `Update_<GroupNumber>.txt` that will contain SQL statements performing the followings. Insert additional data in the tables appropriately. If needed, assume additional data (e.g., street address of the new partner).
- I. Recently (in August 2025) Kakadu Kitchen formed a new partnership with 'Brisbane Fresh' located at South Brisbane as a producer and supplier with a total investment amount of \$345,000. 'Brisbane Fresh' agreed to invest \$150,000 with a sale share of 65%.
  - II. Observing the growing demand in local community, they decided to produce an existing product named 'Kakadu An-marabula Bellini' which is 'Native Peach Bellini, non-alcoholic spirit alternative'. However, for this product there is an existing partnership with '**ALTD Spirits**' and the product is available in **four variations (still, sparkling, single glass bottle and pack of 6, i.e., four different products in PRODUCT table)**.
  - III. So, they've agreed to include '**ALTD Spirits**' in this new partnership. 'Brisbane Fresh' was happy to reduce its sale share to 55% and offered its remaining 10% share to '**ALTD Spirits**' which agreed to join the partnership without any investment. The prices and other details of the two products remain unchanged.
  - IV. They agreed to produce 50,000 units of single glass bottles and 20,000 units of pack of 6. **Both were the existing sparkling variations of 'Kakadu An-marabula Bellini'.**
  - V. Thereafter, by mid-September they supplied 1,000 units of **sparkling** single glass bottles to local retailers (non-partners).

*Note: Tasks 1 to 4 are for all students, only 7003ICT students should do Queries IX and X extra in Task 3.*

**You are required to adhere to the following output formatting conventions:**

- Any query requiring names of people should be printed as GivenName FamilyName (e.g. John Wang) in a column labelled Full Name; or addresses should be printed as Full address (e.g., 10 Brendan Place Nathan QLD 4111).

- All monetary values should be printed with a dollar symbol (\$), two digits after the decimal point.
- All dates should be printed as specified in the query or if not specified in the query print in Australian format (e.g., 13/10/2024).

### What to submit?

An electronic copy of your assignment should be submitted online and should include a copy of your report and the four files described in Tasks 1 to 4 above. Zip all the files into a single file named 'a2-<GroupID>.zip' before uploading.

Your report should include:

- Use the supplied template for your Assignment Report.
- An appropriate title page that includes all members of your group and their details and signatures.
- From Page 2 onward, it will contain
  - A) **Task 1:** Physical model of the ERD after you've created tables and their relationships,
  - B) **Task 2:** Individual screenshots of all tables after you've inserted the given input data,
  - C) **Task 3:** Copy your SQL code for each query and place a screenshot of the output table.
  - D) **Task 4:** Copy your individual SQL statement and place a screenshot of the table that is affected by the statement. **Highlight** the table rows / columns / data items that have been affected by the statement.

### Assessment Criteria

- You should write all the SQL queries / statements in a consistent style and use indent format where needed. Submit these in four separate files as advised above.
- The markers are expected to mark your assignment by looking at the report. So, it is important how clear and well organised your report / presentation is. The markers can look at your SQL queries / statements too when needed.
- Make sure you've the expected content in the screenshots which you provide in the report. Do NOT show the full screen of your computer.
- Data correctness and quality. Do not use inappropriate person or company names.
- Please refer to the provided marking guide below to find the distribution of marks.

### Assignment Resources

Find the following information in the attached file:

- The logical ER Diagram,
- Relational Database Schema, and
- The input data.

**Note:** For Task 4 – affected rows, columns or data items in a table can be **highlighted** after taking its screenshot and using an external software such as Paint in Windows machine. Any other tools should be fine. See the sample submission report attached along with this specification file to see what is expected.

**Assessment Criteria and Marking Overview** (may be *subject to change*)  
**For ALL students:**

ITEM	Marks
<b>1. Presentation</b> How clear and well-presented your submission is.	5
<b>2. Creation of database and tables (Task 1)</b> Physical model of the ERD is provided in the report. The text file for creation of the database and its tables is also provided. <ul style="list-style-type: none"> <li>- The ERD is well placed and laid out in the report.</li> <li>- The database and its tables are correctly named and created. They include all the PKs and FKs. No evidence that tables have been created using the GUI.</li> </ul>	15
<b>3. Insertion (Task 2)</b> Screenshot of the data in each table is provided in the report. The text file containing all insert statements is also provided. <ul style="list-style-type: none"> <li>- The screenshots of tables are well placed in the report.</li> <li>- The text file successfully inserts data into the tables. NO evidence exporting from GUI. They work properly.</li> </ul>	20
<b>4. Query (Task 3)</b> SQL code for each query and its output table are provided into the report. The text file containing all query statements is also provided. <ul style="list-style-type: none"> <li>- The code and screenshots are well placed in the report.</li> <li>- Appropriate SQL queries / statements are written. They work as intended. Each query should output at least one row of valid data.</li> </ul>	30
<b>5. Update (Task 4)</b> The appropriate SQL statements and screenshots of affected tables, along with the text file containing all relevant SQL statements are provided. <ul style="list-style-type: none"> <li>- The code and screenshots are well placed in the report.</li> <li>- Appropriate SQL statements are written. The tables that are affected are provided with relevant rows, columns or data items <b>highlighted</b>.</li> </ul>	30
<b>Total</b>	<b>100</b>
<b>Out of 10% of the final assessment</b>	<b>10</b>

Mark deductions (out of 10% marks) for all students	Marks
If a submission has mismatching group members between the title page and the canvas group or students change/re-form groups after the group formation due date.	-1
Assignment template has not been used for the report.	-1
If a student submits assignment individually, not as part of a group without prior permission from the course convenor.	-1
Use of GUI in creation of tables and/insertion of data into tables.	-1
More than 3 students per group submission	-2
Mixing of undergrad and postgrad students in a group submission	-2
If all group members do not contribute the <u>same</u> in terms of percentages, then any student with a <u>lower</u> contribution will get their marks deducted.	<u>varies</u>
Only concepts, e.g., SQL statements taught in this course are to be used. If concepts not covered in this course are used, marks will be deducted.	<u>varies</u>