Task 1: Creating a Database

- Create a database of your own choice. It must be a meaningful/thought out database.
- Create a table in your database which must have a **primary key** and the correct **datatypes**. Include a minimum of **5 fields**.
- View and show table structures and data to make sure they are setup correctly.
- Enter records into your table and view them.
- Update a record.
- Delete a record.

Extension Task

Create a **relational** database (2 tables) of your own choice. Which is meaningful and thought-out. In the second table which you have created, ensure to include the Primary Key of your first table.

Task 2: Retrieving Data

1. Follow the instructions to install the UNI database
2. In the example database, retrieve the following information.

    - Obtain all information on the Students not attending course 1
    - Obtain the first name, surname and Date of Birth for the student with the email address: val.bolger@example.com
    - Obtain a list of the modules which have the subject Economics
    - Obtain a list of courses applied for and their application dates which are scheduled before 21st September 2020

Task 3: Creating Calculations

Using the uni database;

1. Count how many students are enrolled overall
2. Calculate the sum of full time fees for every full-time course
3. Identify the cost of the least and most expensive course
4. Calculate the average cost of all part time courses
5. Calculate the fee of each full time course after applying (subtracting) the scholarship discount

Extension:

6. Select only the course number of the cheapest full-time course
7. Find cost of the most expensive course after applying the scholarship discount
8. Count the number of applications for History courses made between 01/03/2020 and 30/08/2020

Task 4: Database Functions

Combine what you have learned about SQL functions to write solutions for the following problems:

1. Write a select statement to obtain all of the student information for successful applications made for Course 11 which do not relate to current students
2. Modify the select statement from the previous example into an insert statement and insert the data into the student table
3. Write a select statement to obtain all the information for the unsuccessful applications made for Course 11
4. Modify the select statement from the previous example into a delete statement and delete the unsuccessful Course 11
5. Write a select statement to identify the unsuccessful applications for course 1 made after 01/03/2020

6. Using the select statement from the previous example, modify it into an update statement and update the applications to successful

Optional Strech and challenge.

1. Obtain a list of Students and the name of the Courses they are studying
2. Obtain a list of course names, full time fees and part time fees for each course
3. Obtain a list of classIDs for the Economics Course and the modules they relate to

Marking Criteria Tasks

	Pass	Merit	Distinction
Syntax	• Attempts to use SQL syntax with some success	• SQL syntax is largely accurate with some errors	• SQL syntax is consistently accurate and appropriate to the task

Marking criteria Task 1-4

	Pass	Merit	Distinction
SQL	• Attempts to create the SQL for the task and bare some resemblance to the answer	• Successfully completes the SQL Using separate insert commands	• Successfully completes the SQL Using a single insert command • All SQL is formatting correctly