**CSC1023 Databases**

**NOTICE to Student Route / Tier 4 Students only:**

**For today, 28th Feb 2022, you are required to participate in the Student Route / Tier 4 Student engagement monitoring process. A QR code will be posted around the laboratory (at the entrance door and with your Demonstrator) and you must scan the QR while you are at the laboratory.**

**Practical 5 – SQL** **INSERT, UPDATE and DELETE**

# Section A. Adding rows with INSERT INTO

**Note**:

This is a continuation to Practical 4 and it assumes you have access to phpMyAdmin and that you have successfully imported [northwind-complete.sql](https://canvas.qub.ac.uk/courses/14922/files/2362482?module_item_id=707650) (please refer to Practical 4 for further instructions if this is not the case).

Perform the following tasks for all the questions listed in this section:

## • write an SQL query,

* **execute** the query,
* **paste** the SQL statement into this document,
* **paste** any output or notes into this document – e.g. what happened, if there was an error, why, etc.

***A1.*** Insert a new row into the customers table, with the following details:

* Company: “Queen’s EEECS”
* Last Name: “Smith”
* First Name: “Bob”
* Email: “bob@madeup.com”
* Job Title: “Fictional Person”
* City: “Belfast”
* Country: “Northern Ireland”   
    
  INSERT INTO customers (company, last\_name, first\_name, email\_address, job\_title, city, country\_region)

VALUES (‘Queen’s EEECS’, ‘Smith’, ‘Bob’, ‘bob@madeup.com’, ‘Fictional Person’, ‘Belfast’, ‘Northern Ireland’)

***A2.*** What was the id of your new customer?

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***A3.*** Make up five more customers including data in ALL columns and INSERT them into the into **customers** table.

***A4.*** Insert a new record into **orders** table, it should have the following details:

**(note: you may well have to look up the relevant IDs as foreign keys in different tables!)**

* Employee: Jan Kotas
* Customer: Company G
* Order Date: 01/02/2021
* Shipper: Shipping Company B
* Shipping Address: “Queen’s University Belfast, Belfast”
* Shipping Fee of 12.30
* No taxes
* Tax Status: Tax Exempt
* Order Status: Shipped

# Section B. Changing rows with UPDATE

Perform the following tasks for all the questions listed in this section:

## • write an SQL query,

* **execute** the query,
* **paste** the SQL statement into this document,
* **paste** any output or notes into this document – e.g. what happened, if there was an error, why, etc.

***B1.*** Inspect **customers** table, find the business phone number of Antonio Gratacos Solsona and you should see that it is stored as (123)555-0100. Then, perform the following tasks:

* 1. Write an SQL command to change its business phone number to (123)555-0123,
  2. Output the newly modified record.



***B2.*** In **customers** table, the owner of company Q has the wrong surname – he is Jean Philippe **Baguette** and not Jean Philippe **Bagel**. Also, his street address has changed to “789 20th Street” - update the customer table and output the newly modified records.



***B3.*** Some customers have had incorrect entries stored in **customers** table. Therefore, inspect **customers** table and perform the following tasks:

* 1. Update the city name and zip code of all customers who live in Los Angel**a**s to the correct spelling of Los Angel**e**s and the new zip code of 90001,
  2. Output the newly modified records.

***B4.*** We have shipped the latest batch of orders – update the **orders** table to set the order status to “Shipped” for any orders that are either “New” or “Invoiced”. **(note: you may well have to look up the relevant IDs as foreign keys in different tables!)**

# Section C. Removing rows with DELETE FROM

Perform the following tasks for all the questions listed in this section:

## • write an SQL query,

* **execute** the query,
* **paste** the SQL statement into this document,
* **paste** any output or notes into this document – e.g. what happened, if there was an error, why, etc.

***C1.*** Remove the customer you added in task ***A1***.

***C2.*** Also, write an additional SQL statement to output the deleted record on screen. What does the output screen show when you try to output the record for the deleted customer?

***C3.*** Write an SQL statement to perform a count of the total number of records in **products** table.

***C4.*** Output the **id** of the products that has a product code beginning with the letters

“**'NWTB-**“.

SELECT id FROM products

WHERE product\_code LIKE 'NWTB-%'

***C5.*** Delete all products that has a product code beginning with the letters **'NWTB-'** . Next, repeat ***C4*** and this time your output screen should show a successful query but with no data, as you have just successfully deleted all records of the products that has a product code beginning with the letters **'NWTB-'** .

DELETE FROM products WHERE product\_code = 'NWTB-'

***C6.*** Write another SQL statement to perform a new count of the total number of records in **products** table (after deleting the records). Compare you result with that from ***C3***, has the total count in products table reduced accordingly after the delete statement in ***C5***?

***C7.*** Write an SQL statement to perform a count of the total number of records in **orders** table.

***C8.*** Output the **id** and order date of the records that had an order date in February 2006.

***C9.*** Delete all orders with an order date in February 2006.

***C10.*** Write another SQL statement to perform a new count of the total number of records in **orders** table (after deleting the records). Compare you result with that from ***C7***, has the total count in products table reduced accordingly after the delete statement in ***C9***?

# Section D. Practice makes perfect – W3 Schools

W3 schools have a number of really excellent online interactive learning resources, including one for SQL.

This can be found here:<https://www.w3schools.com/mySQl/default.asp>

The step-by-step tutorial takes you through key concepts, gives you the opportunity to try this out online and also includes **quizzes** to test your knowledge.

To augment your knowledge (have it explained an alternative way to my waffling on!) we’re going to make use of w3schools throughout this module (and they’re generally a great resource for most web technologies such as HTML or CSS).

**Open up** the SQL tutorial now (link above) and **follow through the topics** up to and including “SQL Delete” – this will cover the work we have already done, but in a fresh way.

