Data Academy HLT

Core Learning

Portfolio Projects

Flipped Learning

Enrichment

Technology

Wellbeing

Soft Skills

Employability

Tasks	GLH
Core Learning – Creating a Database	20 – 40 minutes
Core Learning – Retrieving Data	20 – 40 minutes
Core Learning – Calculations	20 – 40 minutes
Core Learning – Database Functions	20 – 40 minutes
Portfolio Task – Databases	120 – 240 minutes
Flipped Learning – Joining tables	30 minutes
Enrichment – SQL for Data Science	60 minutes
Technology – GitHub	60 minutes
Wellbeing – Health & Safety whilst working from home	60 minutes
Soft Skills – Time Management	60 minutes
Employability – Updating your CV	60 minutes

*Times are a rough guideline

TECH TALENT ACADEMY

Core Learning 1

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.

Creating a Database

1. Create a database of your own choice.
2. Create a table which must have a primary key and the correct datatypes.
3. Include a minimum of 5 fields.
4. View and show table structures.
5. Enter 10 records into your table and view them.
6. Update a record.
7. Delete a record.

REMINDER

Must check marking criteria

Use examples from lesson

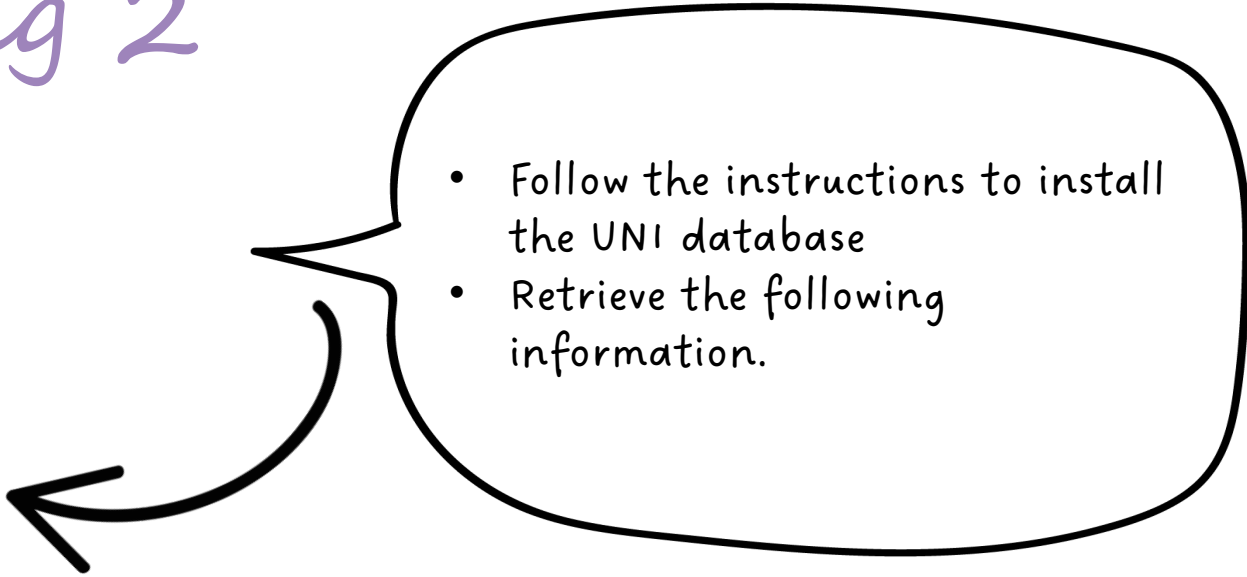Once complete, submit via Teams

Marking Criteria – Creating a database

	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
Code	• Attempts to create a database and a table	• Created a table with 5 fields • Table contains 10 records • Updated a record • Deleted a record	• Created a relational database which contains 2 tables.

Core Learning 2

To Do –

1. Obtain all information on the Students not attending course 1

2. Obtain the first name, surname and Date of Birth for the student with the email address: val.bolger@example.com

3. Obtain a list of the modules which have the subject Economics

4. Obtain a list of courses applied for and their application dates which are scheduled before 21st September 2020

- Follow the instructions to install the UNI database
- Retrieve the following information.

Marking Criteria – Retrieving Data

	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
Code	• Attempts to retrieve some information from the uni database	• Successfully retrieves all information from the uni database	• Write their own quires to retrieve additional information and explore the uni database

20 – 40 mins

Core Learning 3

To Do –

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:

1. Select only the course number of the cheapest full-time course.

2. Find cost of the most expensive course after applying the scholarship discount.

3. Count the number of applications for History courses made between 01/03/2020 and 30/08/2020
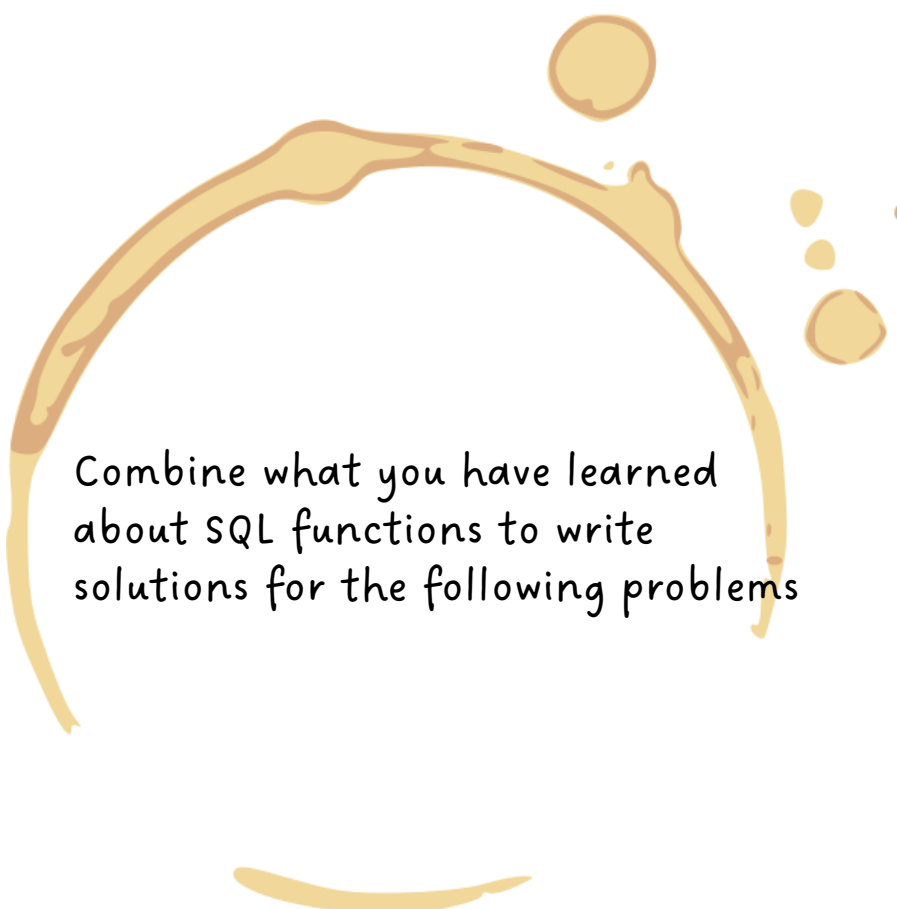
Marking Criteria – Creating Calculations

	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
Code	• Attempts to complete some calculations	• Successfully completes all calculations	• Completes the extension tasks

Core Learning 4

To Do –

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

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

Core Learning 4 continued

To Do –

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

Extension:
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 – Database Functions

	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
Code	• Attempts to complete some database function tasks	• Successfully completes all database function tasks	• Completes the extension tasks

Portfolio Tasks –

Portfolio Projects

Option 1

Create a database for Instagram

https://www.youtube.com/watch?v=i_1CbyzzlDk

Option 2

How to store your SQL files and work on GitHub

https://www.youtube.com/watch?v=AW_UOq5BtFl

Option 3

MySQL Database YouTube tutorial

https://www.youtube.com/watch?v=ER8oKX5myE0

Remember to upload to GitHub

GitHub

Flipped Learning

We will be looking at the following concepts:

- Joining Tables
- Subqueries

Joining tables -
https://www.youtube.com/watch?v=UfgRTbRN9FM

Subqueries -
https://www.youtube.com/watch?v=tlvxb7UduJw

Flipped
Learning

Enrichment

Use the following resources to explain concepts in more detail:

What is MySQL- https://www.w3schools.com/mysql/mysql_intro.asp

Why is SQL crucial for Data Science? - https://techvidvan.com/tutorials/sql-for-data-science/

Technology

You have provided with a guide how to install GitHub desktop. You will store your online portfolio within GitHub so that future employers can view your coding skills before interview (a link to your GitHub will need adding to your CV).

Follow the guide and upload Core Task 1 and 2 to your GitHub repository.

Technology

Use the following resources to find out more information about IDEs

Brief Overview of IDEs -
https://www.youtube.com/watch?v=vUn5akOlFXQ

More detailed -
https://www.youtube.com/watch?v=0ArUv3VqkZs

Wellbeing

This week, our focus is on **Health & Safety** – ensuring the environment is suitable to work in whilst using a computer

Working with display screen equipment at home - https://www.hse.gov.uk/msd/dse/home-working.htm

Good posture when using display screen equipment - https://www.hse.gov.uk/msd/dse/good-posture.htm

Display screen equipment (DSE) workstation checklist - https://www.hse.gov.uk/pubns/ck1.pdf

Wellbeing

Soft Skills

This week, our focus is **Time Management.**

Many people lead busy lives; examples could include:
- Looking after children, parents or relatives whilst working a full time job.
- Having a part time job whilst studying for a qualification
- Having a very busy social life whilst working a full time job

Whatever the reason, it is important we create a plan to ensure we can achieve our aims and goals for the week/month ahead

One way to achieve this is to block out time on a weekly calendar of 'things' that cannot move; examples could include:
- Dropping children off at school
- Attending a fitness class
- Religious worship

Review the remaining time to plan your week ahead – remember, you also need to sleep ☺

There are many apps that support you with this task on your mobile phone or computer however it may be worth accessing a printable resource to support.

2022 (MS Word format)- https://www.calendarpedia.co.uk/download/weekly/weekly-calendar-2022-landscape-time-management-30-minutes.docx
2022 (PDF format) - https://www.calendarpedia.co.uk/weekly-calendar-2022-pdf-templates.html
2023 (MS Word format) – https://www.calendarpedia.co.uk/download/weekly/weekly-calendar-2023-landscape-time-management-30-minutes.docx
2023 (PDF format) - https://www.calendarpedia.co.uk/download/weekly/weekly-calendar-2023-landscape-time-management-30-minutes.pdf

Soft Skills

Employability

At the start of your course, a CV template was provided for you to complete.

Use the following website to look for jobs within the IT sector.

https://www.itjobswatch.co.uk/

Search for: **data analysts**

A list of the most in demand skills are displayed and ranked in order of popularity.

Use the list as a guide to complete some personal research into these technologies so you are aware of then during interview.

Ensure any experience (within the IT Jobs Watch list) has been added to your CV.

Finally, ensure you have added your GitHub link to your CV.