

**Data & SQL Project Brief**

The project is an essential part of this course. In order to ‘graduate’ and get a certificate of completion you need to create, deliver and present your own database project. Your project should reflect all major learning outcomes from the course modules. There are ‘must have’ core requirements that need to be achieved as a minimum deliverable.

**CORE REQUIREMENTS**

| * Create relational DB of your choice with minimum 5 tables |
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| * Set Primary and Foreign Key constraints to create relations between the tables |
| * Using any type of the joins create a view that combines multiple tables in a logical way |
| * In your database, create a stored function that can be applied to a query in your DB |
| * Prepare an example query with a subquery to demonstrate how to extract data from your DB for analysis |
| * Create DB diagram where all table relations are shown |

In addition to the core requirements you need to include *any 2-3 requirements from the advanced options* list. (Optionally, you can include more or all of the advanced options, the ‘extras’ are entirely up to you. Although they do provide a very good learning ground). Everything outlined in the core and advanced lists have been covered in this course. You can vary your level of the project complexity by tuning the amount of stored objects, analytical filters and functions, as well as amount of tables and their relations in the database.

**ADVANCED REQUIREMENTS**

| * In your database, create a stored procedure and demonstrate how it runs |
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| * In your database, create a trigger and demonstrate how it runs |
| * In your database, create an event and demonstrate how it runs |
| * Create a view that uses at least 3-4 base tables; prepare and demonstrate a query that uses the view to produce a logically arranged result set for analysis. |
| * Prepare an example query with group by and having to demonstrate how to extract data from your DB for analysis |

**PROJECT SUBMISSION AND ASSESSMENT**

• Take a backup copy of your diagram, save it as projectname.sql file and submit via Slack channel before the deadline

• Your instructor(s) will restore the file on their MySQL server and examine the Code

• Your instructors will mark it accordingly, then provide comments and feedback on your project

• A copy of your project file along with the assessment and comments will be forwarded to CFG to keep a record of and to issue you a certificate, upon successful completion of the project

• Every student will be presenting and demonstrating their projects in class during week 8. To summarise you need to do both: present the project in class and submit it online.

**PROJECT PRESENTATIONS**

• Please note that it is possible to be working on a project in groups of two. In this case you can join forces with your classmate and work on the same DB. In this case you would need to take a number of backups and send the updates to each other or store a master copy of the DB on the cloud location e.g. Google Drive

• NB: if you do a group work , you are expected to do all advanced points and produce at least 8 tables in the DB

• You will have approximately 3 min to do a presentation in class. Start with the DB diagram and explain the idea behind your project, what it is for and how it is expected to be used

• Then run your sample queries to demonstrate how functions, store procedures etc. work. Also show the class few snippets of sample data stored in tables

• A quick Q&A about the project at the end of each presentation from your instructors and the group.