School of Computing

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Date Issued	Nov 2023
Code	DSD / M30232
Title	DSD CW2 (ITEM 2)

Schedule and Deliverables

Item	Value	Format	Deadline	Late/EC Deadline
ITEM 2	30%	Moodle - 2 Files • 1 File PDF • 1 File SQL	**16/02/2024 | 16:00**	**01/03/2024 | 16:00**

Notes and Advice

- The Extenuating Circumstances procedure is there to support you if you have had any circumstances (problems) that have been serious or significant enough to prevent you from attending, completing or submitting an assessment on time. If you complete an Extenuating Circumstances Form (ECF) for this assessment, it is important that you use the correct module code, item number and deadline (not the late deadline) given above.
- ASDAC are available to any students who disclose a disability or require additional support for their academic studies with a good set of resources on the ASDAC moodle site
- The University takes any form of academic misconduct (such as plagiarism or cheating) seriously, so please make sure your work is your own. Please ensure you adhere to our *Student Conduct Policy* and watch the video on Plagiarism.
- Any material included in your coursework should be fully cited and referenced in **APA 7** format. Detailed advice on referencing is available from the library, also see TECFAC 08 Plagiarism.
- Any material submitted that does not meet format or submission guidelines, or falls outside the submission deadline could be subject to a cap on your overall result or disqualification entirely.
- If you need additional assistance, you can ask your personal tutor, student engagement officer ana.baker@port.ac.uk, academic tutor eleni.noussi@port.ac.uk or your lecturers.
- If you are concerned about your mental well-being, please contact our Well-being service

READ THE ASSESSMENT

Important: Do not leave your submission to the last minute as your connection or the server might be slow, technical errors, ISP issues etc. Aim to submit a minimum one day before the deadline or in the morning. No submission will be accepted after 16:00. No Excuses.

We are aiming to reply to your questions in 5 working days.

General instructions

Read the tasks carefully and ask if you are unsure of what you are expected to deliver.

Assessment related questions will be answered via email/forums/Discord channel. Please do not send emails from your personal email account. You should use your university email account in order to recognize you. Please allow minimum 5 working days for email replays.

Plagiarism and Poor Scholarship

This piece of work requires you to provide a database solution for a business scenario. You are expected to understand how to reference using the APA 7 system (where is required). Therefore, marks will be deducted for poor scholarship and NO Marks will be awarded for the entire assignment if ANY part of it is found to be directly copied from printed / published work or from another student or generated by AI tools.

Use respected websites for your information gathering. E.g. technical sites such as PostgreSQL, Oracle, IBM DB2, MySQL technical pages or journal articles and reports. To avoid plagiarism, rewrite using your own words, but ensure where you have used the ideas of others you acknowledge the source within the text and provide the full source in the references at the end of the document (using Harvard APA 7 format). If you are not sure how to reference, use the information provided by the Library. We are recommending using Zotero or Mendeley as your referencing system.

Presentation

Proofread your work for spelling, grammar and English prior to submission as clarity of expression is an important part of a research coursework. Please include page numbers and **your Group Number** in the header/footer of the document (on every page).

Anonymity of work

For a fair marking of your coursework, *please use only your Group Number and/or UP number on all documents* instead of your name.

Assessment marks

- **ITEM 2 (Group CW2 16/02/2024 - 30%)**
  - **Re-design** the database following the feedback for the CW1 **and implement** it as a fully functional database.

Assessment Notes

Make sure that you are allocated to a group. You can be part of the same group as CW1 or new group. You can check the group allocation HERE (TBC). You must belong to a group, and you cannot submit the CW as an individual. If you submit a CW as an individual, you will receive 0 marks.

Assessment Description

Following your initial proposed design and implementing the suggestions given in feedback, **redesign your initial ERD** and **create the code** for the proposed database.

The code must work as it is, with all the CREATE table and INSERT statements in correct sequential order. Any M:M relationship must be solved, and all tables must have the correct PKs and FKs, along with any necessary constraints.

The proposed database must be functional and reflect the case study presented in CW1. This is again a group work assessment, and you must collaborate and work together in order to provide a solution.

Virtual Machine Code Collaboration

Note: *You can collaborate to your code using the Visual Studio Live Share in your VSC. Install the extension and validate your account with Microsoft or GitHub, then you will be able to share/join into the same terminal of your VM and watch/input the code.*

ITEM 2 Group CW (30%) - Deadline 16/02/2024 @ 16:00 | 100 Marks

Requirements

2.1. Improved/Revision of the original ERD. Provide both versions of the ERD in the document. The original one (from CW1) and the improved version (The one designed for this CW). The CW1 will not be re-marked, but it will be referenced for comparison purposes.

NOTE: *If you changed your group, YOU MUST provide the ERD for CW1 of all group members. Marks will be deducted if you do not provide the ERD(s)*

(**10 Marks**)

2.2. A short reflective analysis of the aspects you took in consideration and changed from the initial submission. Do not write about "how did you work together" but what/why have you re-designed the database as you did (approx. 500 words).

(**10 Marks**)

2.3. Updated Data Dictionary - A new Data Dictionary that will follow the new created database. The data Dictionary must follow this template.

(**10 Marks**)

2.4. The physical implementation of the database. **ALL SQL code** (`CREATE`) and sample data that you have used for testing the database (**INSERT**). The code must be organised in the correct CREATE/INSERT sequence as it will be tested on the VM, having appropriate comments where necessary. The code should work as it was provided, as we are just using COPY/PASTE into the VM. The physical database should follow the improved ERD you have created for 2.1.

Check your code before submission. If the database does not work, there will be no way to assess your database functionality. We will not fix your code.

(**50 Marks**)

2.5. Innovation and excellence - Awarded for extraordinary work that goes beyond minimum requirements (e.g. ready to be used database, out of the box thinking, coverage of business aspects that are very logical but were not listed into case study, extremely complex database design), with innovative aspects. Also appropriate CW layout, references grammar & punctuation and anything else that is outstanding.

(**20 Marks**)

Submission Guidance

The deadline for submission is 16/02/2024 @ 16:00. Only one group member needs to submit. If member 1 makes a submission and two min later member 2 submits again, the submission made by member 1 will be overwritten. The submission box will accept only 2 files and 2 file types (One PDF and one SQL file).

The PDF file should contain your contribution statement (optional), reflection, CW1 ERD, the ERD for the current proposed solution and the new Data Dictionary (see checklist).

NOTE: *The word limit is a guidance for Requirement 2.2. Please keep it sensible without writing essays and make 500 words, 2000 words. 500 words are about 90% of a Normal Layout page (without any images). Focus on quality, not quantity.*

The SQL file must contain the entire database CREATE TABLE statements and INSERT statements used to test the database.

Submission checklist

- Contribution statement (Optional - PDF)
- The previous ERD / or ERDs if you changed the group - CW1 (PDF)
- Improved ERD / new created ERD for the CW2 (PDF)
- Reflective Analysis (PDF)
- The new Data Dictionary (PDF)
- The SQL code with CREATE and INSERT samples (SQL)

Please read carefully and submit ALL required elements.

No	Element	Description	Max Marks
1	ERD	- Meaningful entities with relevant attributes - Relevant and correct data type/size - Correct cardinalities, PKs, FKs and Composite Keys - Logical and clear layout (no overlapping lines) - Crow's Foot notation (0 Marks for any other notation)	**10**
2	Reflective Analysis	- Why did you make those changes (*not because we said so but your logical understanding*)? - What would be the benefit? - What issues did you handled? - etc…	**10**
3	Data Dictionary	- Correctly layouted data dictionary (use template) - Correctly identified PKs, FKs, AKs and potential INDEXs - Justified constraints - Good descriptions (where necessary) - Tables must be in 3NF and follow exactly the ERD and the Code	**10**
4	Physical Design (The Code)	- The database must be submitted as single SQL file and have all CREATE / INSERT statements included - ALL the tables (with PKs, FKs, Composite Keys, constraints, indexes) and sample data as INSERTS - The code must work as Copy/Paste into VM - Maintainability aspects - *Check the code before submission*	**50**
5	Innovation & Excellence	- Awarded for extraordinary work that goes beyond minimum scenario description and requirements, including but not limited to organised layout, grammar, references, code complexity and anything else that is outstanding.	**20**

Please READ notes.	**TOTAL MARKS 100**

Note[1]: *You must submit only 2 files. 1 PDF with the 2.1, 2.2, 2.3 and one SQL file with 2.4*

Note[2]: *The SQL code must be written by you without using 3rd party tools (e.g. pgAdmin) or generated by any AI tool. If evidence is found that the code was auto generated, 0 marks will be awarded. You can auto generate INSERT using Mockaroo, GenerateData or any other data generator tools but not the CREATE statements.*

Note[3]: *The code **MUST** be submitted as PostgreSQL code and be organised in the correct CREATE & INSERT sequence. All codes will be tested on the Uni's VMs. MySQL, MariaDB, MsSQL code syntaxes will not be accepted. Check the code before submission.*

Note[4]: *Do not submit full code with the PDF. The CREATE & INSERT statements must be in a separate SQL file.*

Grades Distribution	
0%	0 is reserved for non-submissions or plagiarism
1% - 19%	Very poor attempt with limited understanding of database principles. Missing elements from requirements, incomplete or grossly incorrect ERD, no code provided or theoretical aspects etc.
20% - 39%	Poor understanding of the database principles, incorrect allocation of the PKs/FKs, with minimal coverage of the requirements, errors in code
40% - 49%	Partial theoretical requirements covered, some correct elements in design, some errors in code.
50% - 59%	Mostly a good, logical design with all PKs/FKs and cardinalities correctly represented in ERD, sensible and justified reflection, some minor errors in code
60% - 69%	Complete CW with very good logical design, including all correct PKs, FKs, cardinalities; Good discussion of reflective aspects with appropriate examples and references. Good physical implementation with sensible constraints and no errors.
70% +	Excellent and extensive coverage of business case good justification of the decisions, exceptional design of the ERD, no errors in SQL code, maintenance considered. Almost a "*ready to be used*" database.

The CW will be assessed against the following criteria:

- Rational and Logical aspects in relation with databases best practices and case study
- Suitable, sensible and complete set of attributes with appropriate data type and size
- Organisation and layout of designs and report document
- Discussion and justification of reflective elements
- Database optimisation (through appropriate constraints, cheks, data type/size)

- SQL formatting, comments and errors
- Overall complexity (logical & physical)
- References, grammar & punctuation

Marks are released after 20 working days

(excluding weekends and bank holidays)