

Database Systems Development Coursework 2020

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Module Code	M30232
Title	Database Systems Development

Schedule and Deliverables

Item	Format	Deadline	Late	ECF Deadline
Coursework Tasks 1 & 2	One file (.pdf)	21 st January 23:00	4th February 23:00	4th February 23:00

Overall Task

Produce documentation and SQL code to create a database designed to fulfil the criteria for a specific case study.

Scenario

Background - Hello Teck

Hello Teck, (HK), is a small tech company that is known for gathering information that is useful to people in the tech industry.

You have been asked to develop a database that supports the needs of HK's blog. There are six members of staff, any of whom can work on blog entries. These blog articles can be written by a single member of staff or a combination of staff. The articles are text only and need to be stored in a database in such a way that the author or authors can be identified easily. Members of the public can make comments about the articles but can only do so once they have signed up to the company's website. These member's details need to be

stored in the database. One of the features of the database is that the comment creators must be linked to the comments that they create as well as the link between these comments and the articles they are related to.

Requirements

- The database must keep a record of:
 - Members of staff
 - Members of the public who have signed up on the website
 - Articles
 - Comments
- It **must** be possible to identify who wrote the articles
- It **must** be possible to see who created comments
- It **must** be possible to see which comments are about which articles.

This list is the minimum that your ERD must show. There may be other information that you consider necessary and you can include these ideas if you wish to do so.

Task 1

Create a data dictionary for the tables you have identified in your ERD. Don't forget the intersection tables for any many-to-many relationships. The tables should contain a logical range of attributes and clearly indicate the keys. For each table, the data dictionary **MUST** include the following:

- The attributes for the table, as they will be named in the database
- The data type and size you have chosen for each attribute
- Where appropriate, whether an attribute is a primary or foreign key
- For foreign keys, the table they relate to.

Task 2

Create an ERD that shows your database's design.

The ERD **must** show the following:

- Entities with suitable names.
- Attribute names with data types and sizes where appropriate.
- Relationships between tables using Crow's Foot notation.
- Primary and foreign keys must be identified.

It can be created using any suitable software such as LucidChart, Visio or Draw.io,

Hand drawn ERDs will receive zero marks. The ERD MUST be drawn using Crow's Foot notation. Any ERDs submitted not using Crow's Foot will not be marked.

What to submit

One **PDF** file that has the data dictionary and the ERD.

Submit the files via the Moodle dropbox, provided for this attempt, by 21st January 2021 at 23:00 UK time.

This file must be named UPXXXXXXX.pdf. Replace UPXXXXXXX with your student id.

Marking and Feedback

University regulations state that marks and feedback must be returned within 20 working days, (approximately 4 weeks). We do not return some marks before others so all work has to be marked before we return anything. If marks are delayed you will be notified via Moodle with a date that the marks and feedback are expected.

Feedback will be provided via 2 mechanisms:

- A. The marks allocated and feedback for each submission will be released via Moodle and you will be notified by email.
- B. After 21 working days a summary of major issues that have been seen across all submissions will be issues along with a model answer if appropriate.

Referencing and Plagiarism

The coursework should be your own work. We do encourage students to do research outside of the module material provided but you must state where the information came from by properly referencing the sources. Within the School of Computing your work must be referenced using the APA V7 referencing system. See <http://referencing.port.ac.uk/> for more information. Microsoft Word has inbuilt referencing functionality or other tools such as Mendeley or Zotero can be used.

If you use a source that you do not reference, you are at risk of being accused of plagiarism.

The University's description of plagiarism is:

“Plagiarism is the act of using material which is not your own, without making clear reference to the original author/producer.”

If we believe that this is the case you may be asked to attend an interview to discuss your work and there may be disciplinary action taken as a result. See [here](#) for further information.

Anonymity

All coursework should be anonymous, therefore DO NOT put your name on your work. Your student ID must be on each page in the footer.

Marking Scheme Breakdown

Task 1

Data Dictionary: 20 Marks

- 0 - 5 Limited understanding shown of the design stage of database development. Many missing important attributes and / or data types / sizes.
- 6 -10 Poor understanding shown of the design stage of database development. Missing a few attributes and / or data types and / or sizes
- 11-15 Mostly a good design with sensible entity names, attribute names and datatypes and sizes but some weaknesses.
- 16-20 An excellent data dictionary that covers the requirements of the database well.

Task 2

ERD: 30 Marks

- 0 -10 Limited understanding shown of the design stage of database development. Does not match the data dictionary. Incorrect notation used
- 11-15 Poor understanding shown of the design stage of database development. Correct notation used but wrong symbols used.
- 16-20 Mostly a good design with sensible entity names, attribute names and datatypes and sizes but some weaknesses. May not have used Crow's Foot fully or used some of the correct notation.
- 21+ Excellent logical design. Identified all entities with the correct relationships. Matches the data dictionary exactly. Correct crow's foot format used properly.

