# IN1013: Databases

# Coursework 1 (of 2): Database Design

## Deadlines

The deadline for this coursework is **10th November 2024 at 5pm.**

**Overview**

The brief is to design and specify a database that contains a collection of material on a specific topic. The choice of scenario is yours, but it must NOT be any of the scenarios used in tutorials, examples, exercises, or assessments in this module. You can choose your own content topic, if it fits within a similar scope - i.e., as long as it would require a similar amount of work to those listed below. You will be given credit for models that are specialized to your scenario and are not generic models that could be used for a range of different scenarios.

### Example themes

* Hobbies: fishing, sports, climbing, holidays, hiking.
* Reviews: books, films, restaurant, travel, music, consumer/electronic goods.
* Library catalogues: public, private, university or special libraries.
* E-commerce site: buy and sell items.
* Electronic Health Records

## Specification and Requirements

### Scenario

### You will write a short description of the scenario (max 100 words). You will list 5 example queries to illustrate how the scenario works.

### Database Design

You will create a conceptual and logical design, an Entity Relationship Diagram, using Visual Paradigm for your proposed database. Your database model should have at least FOUR entities and include at least ONE event/action entity. All entities must have at least two attributes and primary keys must be fully specified. In addition, you will specify your design as a relational model by completing the relational model tables in the coursework template.

### Requirements

#### Database Design (47 marks)

* Write a description of your database scenario (max 100 words) and list 5 example queries.
* Create an entity-relationship model using Visual Paradigm for your scenario. Ensure all the requirements are captured. Use the diagram notation introduced in the module, showing attributes and relationships, and their multiplicity and optionality constraints. Show primary keys and foreign keys in the diagram as appropriate.
* Translate the Entity Relationship diagram from your answer into a relational model using the mapping rules established during the module. Ensure that the primary keys are indicated. Make sure that you also reference all the foreign keys.

You must use the Database Design Coursework template document to submit your coursework. Your Entity Relationship model diagram should be exported from Visual Paradigm as a jpg image and included in the coursework template document at the appropriate place. Make sure the objects in the diagram are large enough to be readable, particularly the key indicators, relationships and relationship constraints, as unreadable work will not be marked. Your coursework will be marked according to the grade related criteria below.

### Delivery and Submission Requirements

Submit your completed coursework template as a **word document** through the Term 1 Database Design Coursework submission area on Moodle by the submission deadline. Work will only be marked if it is submitted using the coursework template and in Word document format.

## Grade Related Criteria

General guidelines for what is expected in your assessed work are as follows:

|  |  |  |
| --- | --- | --- |
| **Class** | **%** | **Description** |
| Excellent Pass | 70+ | A database of a professional standard, showing high level knowledge of design techniques. Critical and independent thought are in evidence and novel solutions developed with evidence of innovation in decision-making. The database would be well received in a professional portfolio. No errors or omissions are permitted in excellent work that achieves this grade. |
| Very Good Pass | 60-69% | A database of a high standard. A strong level of knowledge is demonstrated by consistently meeting the coursework brief, using appropriate solutions that have been applied correctly using both design and technical methods. The database must, show very good knowledge of design techniques. Very good work achieves this grade. |
| Good Pass | 50-59% | A database design and technical solution that is effective in that it addresses the coursework requirements in many ways and is robust on the whole. It shows some sophistication but may not meet all of the coursework criteria. Submissions in this category may lack some of the sophistication using conceptual/logical design techniques than in submissions receiving a higher grade. Some minor omissions and errors are acceptable here. However, databases graded in this category demonstrate a sound level of knowledge and the ability to apply it. Solutions awarded this grade can be considered to be good work. |
| Pass | 40-49% | A database and technical solution that is adequate, in that it broadly addresses the coursework requirements. It may be limited in terms of design technical sophistication. Some misunderstanding and minor mistakes and omissions are acceptable here, and solutions may not address all requirements listed. On the whole, however, students achieving this grade will show that they are able use the various design methods. |
| Fail - Poor | 30-39% | Whilst some knowledge is apparent, solutions do not indicate that authors are able to use their knowledge to design a database in a way that adequately meets the coursework requirements. Key functionality will be missing from the database and significant misunderstanding and fundamental design/technical errors will be evident in work graded at this level - conceptual design which is incomplete or inaccurate. |
| Fail – Very poor | 29% or lower | There is little evidence that students submitting work graded in this category have key competencies in designing and creating a database. Both the design and application are incomplete or has serious flaws in terms of approach, content and functionality rendering it inadequate. Work that receives this grade is considered to be poor and typically contains errors and omissions that are indicative of a significant lack of knowledge or understanding in key technologies presented on the module. Solutions are likely to fail to show that fundamental ideas and concepts have been acknowledged and utilised. Partial submissions and work that demonstrates poor academic practice will be likely to be awarded marks in the lower regions of this grade band. |

**Submission Process:**

**The following information on coursework submission re-emphasises the information in your programme handbook.** All submissions are by Moodle. No other form of submission will be accepted.

* Please note that you are **not** required to submit a coversheet when submitting by Moodle. Clicking the Submit button on the Assignment Submission screen indicates that you have read and agreed to the declaration on the left of the submission screen. This takes the place of the coversheet previously used for paper-based submissions.
* Once the deadline has passed coursework cannot be changed, nor can additional materials be submitted.
* Text beyond any specified word limit will not be marked.
* Plagiarism will not be tolerated under any circumstances and where found will lead to a formal investigation of your work and reference to the Academic Misconduct Panel. This might result in penalties ranging from mark deduction to withdrawal from the University. See your programme handbook for details on the nature of plagiarism and the department's policy.
* **The use of LLMs must be restricted to a few lines and must be acknowledged (as a reference). Failure to do so will be considered PLAGIARISM, and an AM case will be raised.**
* **IT IS ENTIRELY YOUR RESPONSIBILITY TO ENSURE THAT YOUR WORK IS SUBMITTED FULLY, CORRECTLY AND ON TIME.**
* It is therefore strongly recommended that you set yourself a 'hard' personal deadline for submission well in advance of the Moodle closing date.

September 2024