

COSC265 EER Assignment

LEARN | AKO

1 Assignment Outline

This assignment focuses on the use of the EER model to design conceptual schema for various databases. You should complete your work with EER Tutor found at <https://ictg.cosc.canterbury.ac.nz:8005/>.

This assignment is worth 25% of the overall grade for COSC265. It is made up of two components, smaller practice problems worth 8% and a larger problem to be submitted via Learn worth 17%. **Note that these two components are due at different times!**

1.1 Small Problems

We have selected three problems in EER-Tutor for you to complete:

- 20 Health Clubs (2%)
- 32 CD Collection (2%)
- 51 News Agency (4%)

Your solutions to these problems are due by 13/08/2021 at 5:00 pm.

Note: you can only submit a solution to each problem once, and no feedback is given at the point of submission.

1.2 Large Problem

The requirements of the large problem are outlined in the section below.

This large problem is due on 30/08/2021 at 5:00 pm. Submissions will be accepted until 03/09/2021 at 5:00 pm, but a deduction of 15 marks will be made to your final grade. (So if you got 80 of the 100 marks available, you would receive a final score of 65.) Submissions beyond this time will not be accepted.

It is required that you prepare your final submission using EER-Tutor, using the free hand mode (question 99). It is a good idea to develop your initial solution on paper. You must also generate a report. This is a simple document that should list the set of assumptions that you are making about the mini-world that you are modelling. *Note that assumptions should not just be restatements of the requirements, or be obvious consequences of the requirements.* You should aim to limit your report to approximately 500 words — exceeding this limit should be done with care!

You can submit your solution via Learn nearer to the due date. Your schema should be a .png image, and your report a .pdf document. Both should clearly display your full name and student ID.

2 Requirements

Introduction

LEARN | AKO is a learning management system that the University of Canterbury uses to manage access to teaching materials by students and staff. This assignment draws inspiration from LEARN, but differs in a large number of ways. Make sure to follow the requirements below.

Users

- To use LEARN you need to have a user account. This account is identified by a username, which is composed of the initials of the user and two to three digits. You will find yours on your Canterbury Card.
- Each user must also have a password. This password must be at least 10 characters long, and contain at least one numerical character and one upper case character.
- Each user has a first and surname name stored in the system.
- A user may have a profile photo and/or a biography.
- Each user participates in a course as either a student or a teacher. This role may be different in different courses.
- Each student has a student number and a year of admission. If they live in a hall of residence, this is also stored.
- Each Teacher has a department code (e.g. CSSE) and a job title.

Courses

- Each course has a course code and semester instance that together are unique (e.g COSC265-21S2), a course name, and a description.
- Each course has, start and end date, and may be either visible or hidden.
- Each course must have a category. A category has:
 - a unique ID
 - a name
 - an owner, which may be a department, college, or unit
- Each course is taught by at least one lecturer, but multiple lecturers can be involved in delivery of a course.
- Students must take at least one course.
- Each student is assigned a mark for every course they are enrolled in and an associated grade. This grade is informed by the student's performance in assessments.

Course Composition

- Courses have sections. Each course has a general section, but may have other sections.
- Each section has a number, unique within the context of the course.
- Each section also has a title and a description.

Resources

LEARN has a wide range of resources. We will be modelling just a subset of what LEARN provides.

- Each course can have resources. Resources are stored in sections.
- Each resource has an ID unique within the section, as well as a title and description. Resources may be hidden from students.
- Each resource can be one of the following types:
 - **Forum:** a forum has a subscription mode, which dictates how users can subscribe to it. Offered modes are optional, forced, auto, and disabled. Users must also participate in a course to be able to subscribe to it.

- The ability to post to a forum is determined by the type of the forum. For example, if a forum is used for news then only a Teacher can make a post. If a forum is used for questions and answers then students' and teachers can post to a forum.
- A post has a topic, timestamp, and text. It also has an ID that is unique within the context of that forum and user.
- A post may be in response to another post.
- **URL**: has a web address associated with it.
- **File**: Lists the location of a file. A display option is also stored, e.g. embedded, force download, open in new window etc.
- **Label**: Each label has a segment of html code. It may have embedded images associated with it.
- **Assessment**: Each assessment has a total worth for that component.
- An **assignment** is a type of assessment. It has a list of accepted file types.
 - A student submits a file, at a particular date and time, and receives a mark and feedback on that submission.
- A **quiz** is another type of assessment. Each quiz must contain questions.
 - Each question has a question type, question text, a mark for that question, and a penalty regime that is applied upon successive attempts.
 - Each question has a unique ID, and must be associated with at least one quiz.
 - Questions contain options that students can select. Each option has a candidate answer, whether that answer is correct, and an explanation of that option.
- A student submits a quiz at a particular date and time, and receives a computed grade. Students can reattempt quizzes.

3 Change Log

- 25/08/2021 : 11:30 am
 1. Changed due date for the large problem to 30/08/2021 at 5:00 pm
 2. Stated dropdead date explicitly as 03/09/2021 at 5:00 pm