COMM1822

Term 2 2022

Introduction to Databases
for Business Analytics

Week 2 Entity Relationship
(ER) Modelling Part 2

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Week 2 Welcome Video (Online Class Manner)

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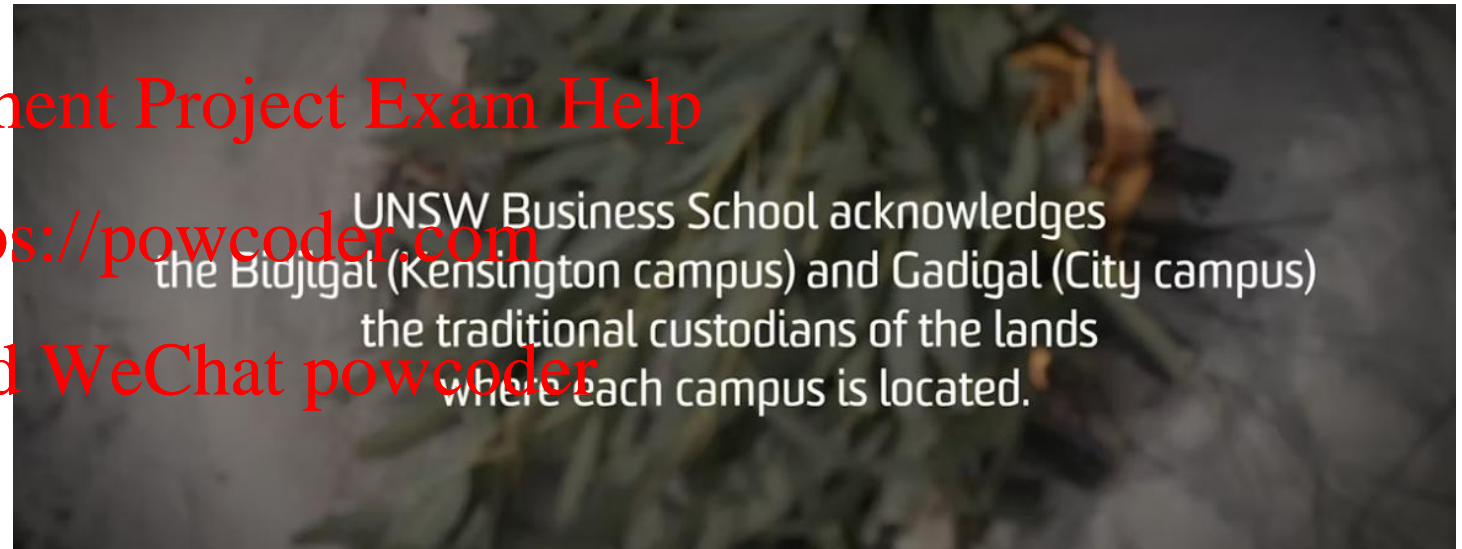
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Acknowledgement of Country

UNSW Business School acknowledges the Bidjigal (Kensington campus) and Gadigal (City campus) the traditional custodians of the lands where each campus is located.

We acknowledge all Aboriginal and Torres Strait Islander Elders, past and present and their communities who have shared and practiced their teachings over thousands of years including business practices.

We recognise Aboriginal and Torres Strait Islander people's ongoing leadership and contributions, including to business, education and industry.

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UNSW Business School. (2022, May 7). *Acknowledgement of Country* [online video]. Retrieved from https://vimeo.com/369229957/d995d8087f

Agenda

❑ **Admin**

❑ **Exercises**

❑ **Group forming**

PASS Class

Day/Time	Name	Location
Friday 10 – 11 am	Srilekha Kolaki s.kolaki@student.unsw.edu.au	On-campus BUS 216 Online via MS Teams

Starts this week! (Week 2)

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Admin

❑ Groups must be formed by the end of this session.

❑ At the end of this session you need to fill-in and sign the form (on Moodle under Team Assignment Section) and **only** the Team Leader (of each group) should email the form to your tutor. If you do not send the form, we will assume that you do not have a group and we will assign you to a group.

❑ We will start SQL in Week 3 Tutorial.

❑ You will receive an email with your login details and how to access it in UNSW myAccess (or install SQL Developer on your device for Windows 64-bit OS).

Agenda

❏ **Admin**

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❏ **Exercises**

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❏ **Group forming**

ER Modelling Guideline (Lecture Recap)

❑ Ask yourself the following questions:

- ▪ What are the relevant entities here?
- ▪ What are the relevant relationships here?
- ▪ Can I generalize some entities?

❑ Document your **assumptions** as you go.

❑ Leave **cardinalities** until the end.

Draw ERD in an iterative way (draft, review, revise, review…,finalise).

Even experienced designers may need 5-7 drafts before finalising the solution.

Exercise 1

Create the ER diagram (entities, relationship, and key attributes) appropriate to the following description of a university program structure:

Business Rules:

❑ A program contains many courses.

❑ A course can be part of many programs.

❑ Students enrol in many courses.

❑ Students may enrol in more than one program.

Do NOT use composite entities for now.

Exercise 2

Now, break the ternary relationship from Exercise 1 up by using composite entities.

Break

❑Online Safety

- ▪ Rest Breaks: https://safety.unsw.edu.au/office-safety-toolkit/office-workstations/rest-breaks
- ▪ WorkRave at UNSW: https://safety.unsw.edu.au/sites/default/documents/UNSW_WorkRave_V1.0.pdf
- ▪ Guide to Office Workstation Set-up https://safety.unsw.edu.au/sites/default/files/documents/HS705_Guide_to_setting_up_your_workstation_0.pdf
- ▪ Online Safety and Wellbeing Tutorial: https://student.unsw.edu.au/safety
- ▪ SafeWork 6 Simple stretches: https://www.safework.nsw.gov.au/resource-library/six-simple-stretches

Exercise 3

The entity type PERSON has three subtypes: CAMPER, BIKER and RUNNER. Draw a separate ER diagram segment for each of the following situations:

a) A person must be exactly one of these subtypes.

b) A person may or may not be one of these subtypes. A person who is one of these subtypes cannot at the same time be one of the other subtypes.

c) A person may or may not be one of these subtypes. A person could be any two (or even three) of these subtypes at the same time.

d) A person must be at least one of these subtypes.

Exercise 4

Create an ER diagram for the following entities:

❑ **REGULAR_PHONE_CALL** (Source_No, Destination_No, Time_Of_Day, Duration, Customer_ID)

❑ **LONG_DISTANCE_CALL** (Source_No, Destination_No, Time_Of_Day, Duration, Long_Distance_Carrier, Customer_ID)

❑ **CELL_PHONE_CALL** (Source_No, Destination_No, Time_Of_Day, Land_time, Air_time, Customer_ID)

❑ **CUSTOMER** (Customer_ID, Name, Address)

- - - - - - - - **Indicating foreign key**

_____ **Indicating PK**

Group Forming

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Assignment Groups

➢ **Form your groups**

➢ **Fill in the form**

➢ **The Team Leader should email the form to the tutor**

➢ The **First name** on the from will be the Team Leader

➢ Each group will be allocated a Group-ID by the tutor.

 e.g. **T10A-99** **T10A is the tutorial session, and 99 for group number.**

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To do for Week 3

❑ Week 3 Course Preparation

❑ You will receive an email with your login details and how to access it in
UNSW myAccess (or install SQL Developer on your device for Windows
64-bit OS).

❑ SQL credentials are **NOT** the same as UNSW credentials