

Assignment 3 – Marking Guide/Sheet
COMP1140 S2 2022
School of SIPS, University of Newcastle, Australia

Marks: out of 150

1. Revised content of assignment 1 and assignment 2: **(30 marks)**
 - Requirement Specification (including data requirements, transaction & business rules) (2.5)
 - EER Diagram and Data Dictionary (2.5)
 - Reflection on assignment 2 submission (summarise & propose) (5)
 - Mapping of the EER model to the relational model in DBDL (10)
 - Normalizing the relational schema to Boyce-Codd Normal Form (10)
2. Completed major steps in the physical database design: **(115 marks)**
 - 2.1 Write SQL scripts which create the normalised SCS database, including all necessary tables with right parameters such as primary key, foreign key, default value. (50)
 - + The codes work, can create the database with correct tables (5)
 - + Have codes to delete all the tables and re-create tables (i.e., the sql file can be rerun) (10)
 - + Right tables according to the normalised table list (for each unimplemented table, -1) (15)
 - + Right Foreign Keys, all with referential actions (-0.5 for each FK; if a FK has not had the definition “on Update ... on Delete ...”, -0.25) (10)
 - + Right attributes & data types (2)
 - + Right Primary key (3)
 - + Have at least 2 Nulls (2)
 - + Have at least 3 defaults (3)
 - 2.2 Write SQL statements satisfying the transaction requirements including the following (65)
 - 2.2.1 Input proper data (as you consider legitimate) of at least four rows for every table (15)
 - 2.2.2 Implement the following queries (50)

Note: if void output, or zero value, or no output, is shown, no mark for each query.

Q1: Print the name of student(s) who has/have enrolled in the course with course id xxx. (5)

Q2: Print the maximal number of speakers that the student with name xxx can borrow. The student is enrolled in the course with course id yyy. Note: speaker is a category. (5)

Q3: For a staff member with id number xxx, print his/her name and phone number, the total number of reservations that the staff had made in 2022. (10)

Q4: Print the name(s) of the student member(s) who has/have borrowed the category with the name of camera, of which the model is xxx, in this year. Note: camera is a category, model attribute must be in movable table, and “this year” must be decided by the system. (10)

Q5: Find the moveable resource that is the mostly loaned in current month. Print the resource id and resource name. Note: “current month” must be decided by the system. (10)

Q6: For each of the three days, including May 1, 2022, June 5, 2022, and September 19, 2022, print the date, the name of the room, and the total number of reservations made for the room xxx on each day. (10)
- 3 Report Writing **(5 marks)**
 - +style, grammar, and make sure all letters and drawings are legible, etc.

During the lab viva the authenticity of your assignment will be verified. Also, you will be asked to point out any additional features you have identified, designed and developed.

NAME (print & sign): **StudentNO:** **Date & Time**