CSIT115/CSIT815 Data Management and Security
Laboratory 4
19 March 2018

Scope
This laboratory includes the tasks related to logical design and implementation of CREATE TABLE statements of SQL.

Important messages
Please read the messages listed below before implementation of a task included in a specification of Laboratory 4.

More implementation related information can be found in "How to … ?" Cookbook available through Moodle or at:
 `http://www.uow.edu.au/~jrg/115/COOKBOOK`.

The outcomes of Laboratory 4 are due by **Saturday, 7 April, 2018, 10.00 pm (sharp).**

Laboratory 4 contributes to 2% of the total evaluation in the subject.

A submission procedure is explained at the end of this document.

Only one submission of Laboratory 4 is allowed and only one submission per student is accepted. Please make sure that you submit the correct files.

A submission that contains an incorrect file attached is treated as a correct submission with all consequences coming from the evaluation of the file attached.

Compressed (zipped, rared, tared, etc) files will not be evaluated.

A submission marked by Moodle as "late" is treated as a late submission no matter how many seconds it is late.
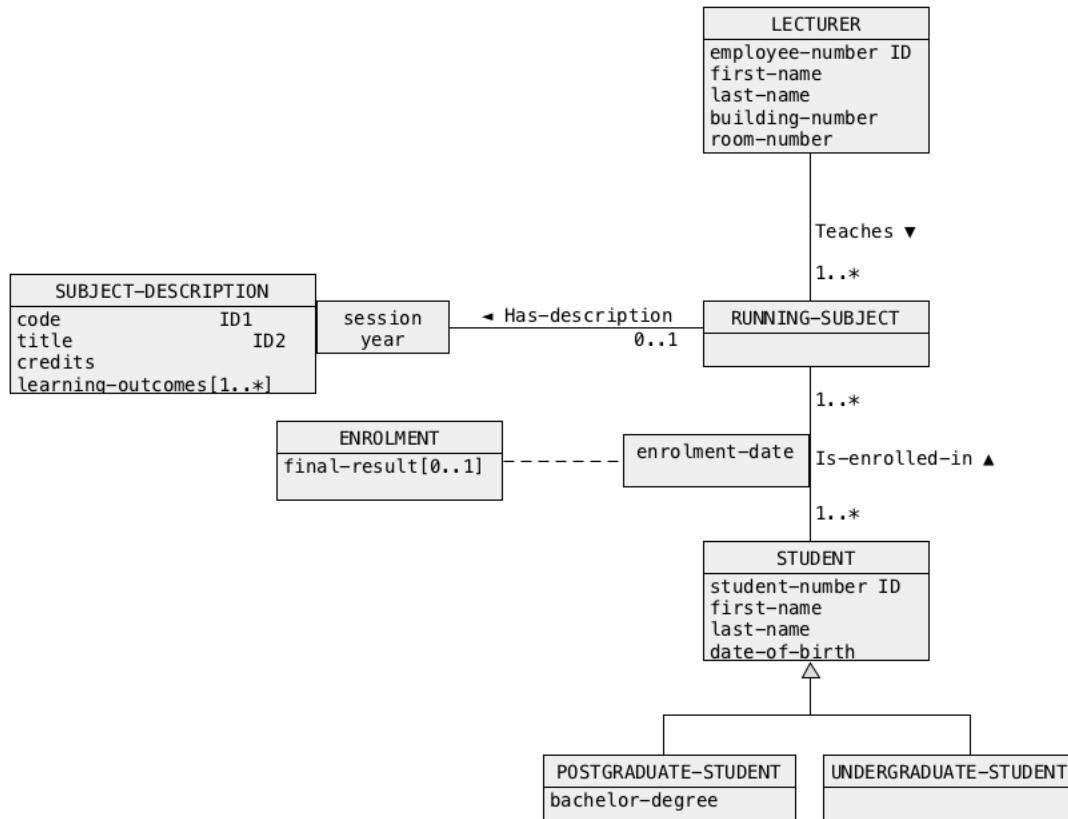
The reports from processing of SQL scripts must return NO ERRORS ! A solution with the errors is worth no marks !

A policy regarding late submissions is included in CSIT115/815 Subject Outline.

Tasks
Task 1 (2 marks)
Consider a conceptual schema given below.

Perform logical database design and transform a conceptual schema given above into a collection of relational schemas. No report is expected from logical design. Use a **superset** method for implementation of generalization.

Next, use the relational schemas obtained in the previous step to create SQL script `solution1.sql` with `CREATE TABLE` statements that implement the relational schemas.

Note, that you MUST use only `CREATE TABLE` statements and no other statement of SQL !

You can find a lot of information about implementation of `CREATE TABLE` statements in a presentation 09 SQL - Data Definition Language (DDL) and in Cookbook, How to use data definition and basic data manipulation statements of SQL, Recipe 4.1 How to create and how to alter the relational tables?

When a script file `solution1.sql` is ready connect to MySQL either through command line interface `mysql` or graphical user interface MySQL Workbench and process your script file.

If processing of the file returns the errors then you must eliminate the errors! Processing of your script must return NO ERRORS ! A solution with errors is worth no marks **!**

It is recommended to create a script `drop.sql` that drops all relational tables created by processing of a script `solution1.sql` and it is recommend to execute `drop.sql` after each processing of `solution1.sql`. In such a way you can avoid an unpleasant syntax error messages like:

`ERROR 1050 (42S01): Table '…' already exists`

when you process a script `solution1.sql` the next time. Please, remember that such message also counts as an error in processing of the script with all consequences coming from such fact.

When processing of your script returns no errors connect to MySQL server using command based interface `mysql` and create a report from processing of the script `solution1.sql`. Save your report in a file `solution1.rpt`. To create a report you must use a command `tee  solution1.rpt` before processing the script and a command `notee` after processing of a script. Then, you can find a file `solution1.rpt` in the current folder of `mysql` client. You can find more information about creating reports from processing of SQL scripts in Cookbook, Recipe 3.1 How to use "mysql? Command based interface to MySQL database server? Step 4 How to save the results of SQL processing in a file?

Your report must contain a listing of SQL statements processed. To achieve that, you must logon `mysql` client with **–v** (`verbose`) option in the following way:

`mysql –u csit115 –p` **–v**

You can find more information on how to display SQL statements while a script is processed in Cookbook, Recipe 3.1 How to use "mysql? Command based interface to MySQL database server ? Step 3 How to process SQL script ?.

A report that contains no listing of processed SQL statements scores no marks ! So, make sure that you connect to `mysql` client with an option **–v** !

And again, … a report from processing of SQL script must contain NO ERRORS !

Deliverables
A file `solution1.rpt` with a report from processing of SQL script `solution1.sql`. The report must be created with the command based interface `mysql`, the report MUST NOT include any errors, and the report must list all SQL statements processed. Submission

of a file with a different name and/or different extension and/or different type scores no marks.

Submission
Note, that you have only one submission. So, make it absolutely sure that you submit correct files with the correct contents. No other submission is possible !

Submit a file **solution1.rpt** through Moodle in the following way:
   (1) Access Moodle at **http://moodle.uowplatform.edu.au/**
   (2) To login use a **Login** link located in the right upper corner the Web page or in the middle of the bottom of the Web page
   (3) When logged select a site **CSIT115/DPIT115/CSIT815 (S118) Data Management & Security**
   (4) Scroll down to a section **Submissions**
   (5) Click at a link **In this place you can submit the outcomes of Laboratory 4**
   (6) Click at a button **Add Submission**
   (7) Move a file **solution1.rpt** into an area **You can drag and drop files here to add them**. You can also use a link **Add**...
   (8) Click at a button **Save changes**
   (9) Click at a button **Submit assignment**
   (10) Click at the checkbox with a text attached: **By checking this box, I confirm that this submission is my own work,** ... in order to confirm the authorship of your submission
   (11) Click at a button **Continue**

It is expected that a problem included within **Laboratory 4** will be solved **individually without any cooperation** with the other students. If you have any doubts, questions, etc. please consult your lecturer or tutor during lab classes or office hours. Plagiarism will result in a **FAIL** grade being recorded for that assessment task.

End of specification