



COIS 3400

Introduction to Databases

Lab 6

Objective: The objective of this lab is to ensure you can apply basic concepts relating to relational algebra.

Instructions: This lab was uploaded early, you can simply complete and show it to Daniel tomorrow. Alternatively you can choose to complete it during the lab tomorrow. I am simply giving more time to do it. Feel free to collaborate with your peers and utilize any internet resource. The point of this lab is to ensure you get some practice.

Consider the following relational instances (tables):

Student	
ID	name
159	Joe
123	Jane
65	Johnny

EnrolledCourses	
ID	courseCode
159	COIS3400
123	COIS2240
65	COIS3040
159	COIS3040

Courses	
code	lecturer
COIS3400	Fred
COIS2240	Omar
COIS3040	Omar

Write the relational algebra expression that would correspond to the following descriptions:

- 1- Display the named of each student in the Student relational instance.

- 2- Display each course being taught by lecturer="Omar".

- 3- List and very briefly explain two differences between a selection and a projection in RA (not an RA question, very strong chance something like this will be on the final exam).

- 4- Display the ID and name from the students table and the id and the code from the EnrolledCourses table in on resulting relational instance (one result). Hint: you may want to utilize a join that has a condition.

Please note: even if you decide to do the lab ahead of time and simply show it to Daniel, you still need to physically go and show it to him. Email submissions will not be accepted. It will not be marked for correctness, it will be marked for completion. This is not the opportunity to test you, it is an opportunity for you to get some practice.