# Lab 8

You should work in groups of 2 or 3 for this lab, you should note that in order for you to do some of the aggregation questions you may have to look for the syntax in books or online.

Write SQL code to answer the following:

1. What is the average mark for each subject, you must display the subject name.

SELECT sname, AVG(mark)

FROM Marks INNER JOIN Subject USING (subjectid)

GROUP BY sname;

1. What is the average mark for COMP1001?

SELECT sname, AVG(mark)

FROM Marks INNER JOIN Subject USING (subjectid)

WHERE subjectid = “COMP1001”;

1. A list of all majors with the average mark, maximum mark and minimum marks.

SELECT sname, AVG(mark), MAX(mark), MIN(mark)

FROM Marks INNER JOIN Subject USING (subjectid)

GROUP BY sname;

SELECT major, AVG(mark), MAX(mark), MIN(mark)

FROM Marks INNER JOIN Student USING (studentid)

GROUP BY major;

1. Refine the list so that the mark is displayed as a whole number only.

SELECT sname, ROUND(AVG(mark)), ROUND(MAX(mark)), ROUND(MIN(mark))

FROM Marks INNER JOIN Subject USING (subjectid)

GROUP BY sname;

1. Which subject has the highest average mark?

SELECT sname, AVG(mark)

FROM Subject INNER JOIN Marks USING (subjectid)

GROUP BY sname

ORDER BY AVG(mark) DESC

LIMIT 1;

SELECT subjectid, avg\_mark

FROM

(SELECT subjectid, AVG(mark) AS avg\_mark

FROM marks

GROUP BY subjectid)

WHERE avg\_mark = (SELECT MAX(avg)

FROM (

SELECT subjectid, AVG(mark) AS avg\_mark

FROM Marks

GROUP BY subjectid));

1. Generate a list of all subjects on a particular degree and the numbers of students enrolled on each of those subjects, you should order you results by the degree/major being studied.

SELECT sname, COUNT(sname)

FROM Enrolled INNER JOIN Subject USING (subjectid)

GROUP BY sname

ORDER BY sname;

SELECT major, subjectid, COUNT(studentid)

FROM student INNER JOIN enrolled USING (studentid)

GROUP BY major, subjectid

ORDER BY major;

1. Display the class schedule in the following format:

Module code COMP0023 (Business Fundamentals) runs on a Monday at 2pm

Module code COMP0055 (Business Case Project) runs on a Monday at 9am

Module code COMP0422 (Database foundations) runs on a Tuesday at 11am

Module code COMP0423 (Database system development) runs on a Tuesday at 9am...

SELECT “Module code ” || subjectid || “ (” || sname || “) runs on a ” || day || “ at “ || classtime

FROM Class INNER JOIN Subject USING (subjectId);