

# SIT103 Database

## Lab Exercise 3 – group by

### Background

This week we will review answers to last week's queries and get some more practice at creating SQL queries using the syntax we learnt from the lecture.

PLEASE REFER TO THE LECTURE NOTES FOR HELP AND ASSISTANCE.

### Tutorial Exercises – GROUP BY

Using the STUDENT tables, write queries to produce the following reports.

- A. Show all enrolled (student\_course) students in the course BI943 (course\_code).

```
Select * from student_course where course_code = BI943
```

- B. Show enrolled (student\_course) students in BI943 (as in last question), but show only the number of students in each course\_programme code.

```
Select course_programme, count(*) from student_course  
where course_CODE = BI943 group by course_programme;
```

- C. What is the smallest and largest post code in the student table ?

```
Select max(post code), min(post code) from student;
```

- D. Show all the course codes and the total number of students in each course. Only show courses that have 2 (two) students enrolled in it.

```
Select course_code, count(*) from student_course group by course_code having count(*) = 2;
```

- E. List the total number of students that are enrolled in each programme. Do not list details for each student.

```
Select course_programme, count(*) from student_course group by course_programme;
```

- F. The business department (165) is rebuilding it's student restrooms. There is a strong push to give equal space to both male and female restrooms. Provide a report that shows the number of male and female students enrolled in that department. Note: The programme\_code can be used to extract only students in the 165 department.

```
Select sex ,count(*) from student where PROGRAMME_CODE like '165%' group by sex;
```

- G. Show the age of all students in programme 165000.

```
SELECT floor((sysdate - DOB) /365.25) FROM student where programme_code = 165000;
```

- H. Show the average age of all students in programme 165000.

```
SELECT AVG(floor(sysdate - DOB) /365.25)) FROM student where programme_code = 165000;
```

- I. List all fields in course table that have the word 'PROJECT' anywhere in the subject name and whose department number is between 120 and 125.

```
select * from course where course_name = %project% and dept_no between 120 and 125;
```