SIT103 Database
Lab Exercise 6 - Nested

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 – NESTED QUERIES

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

A. Show the oldest and youngest students in one query; show the full name and date of birth for these students.

B. List the students that are enrolled in only 1 course in semester 1.

C. List the students that are enrolled in no courses.

D. Are there courses that have no enrolments?

E. Show the name, date of birth and sex of students that have done more than 11 courses.
   a) Using a sub-correlated query

   b) Using a JOIN

F. Show course code and name of all courses in the department of 165 which have more than 16 student enrolled in them
   a) Using a sub-correlated query

   b) Using a JOIN

G. Run the following code to create an AGE function:

```
CREATE OR REPLACE FUNCTION AGE(dtDOB DATE)
RETURN NUMBER AS
BEGIN
    RETURN FLOOR( (SYSDATE-dtDOB) / 365.25 );
END;
/
```

H. Write a question that uses the above function. Eg.

```
SELECT age(dob)
FROM STUDENT;
```

I. Execute the following command:
   SET SERVEROUTPUT ON

J. Execute the following create table statement:

```
CREATE TABLE CATEGORY(
    CATEGORY_NO NUMBER(4),
    DESCRIPTION VARCHAR(20)
);

INSERT INTO CATEGORY VALUES(1,'JAZZ');
INSERT INTO CATEGORY VALUES(2,'ROCK');
```

K. Create the following trigger that will fire when an insert occurs on the CATEGORY table created previously.

```
CREATE OR REPLACE TRIGGER checkCategoryInsert
BEFORE INSERT
ON CATEGORY
FOR EACH ROW
BEGIN
    DBMS_OUTPUT.PUT_LINE('insert triggered: ' ||
:new.description);
END;
/
```

L. Try the following inserts, what happens? Why does this happen?

```
INSERT INTO CATEGORY VALUES(3,'POP');
INSERT INTO CATEGORY VALUES(4,'CLASSICAL');
```

M. Finish outstanding queries in other tutorials.

N. Work on Assignment queries.