

ASSIGNMENT 8 - Subqueries

Follow the same formatting guidelines as the previous homework assignment.

YOU must use subqueries. Do not put any codes in your SQL statements. When pasting your results, just provide the first five rows of output if your result set exceeds five rows

Copy and paste the contents of student.txt into your SQLPlus session. Rename the tables such that they are all prefixed with the first five letters of your lastname such as sabze_student. Make sure that the tables (student, class and student_class) are all renamed properly before you continue. You don't need to paste anything from SQLPlus for this question.

1 Using a single SQL statement display fname,lname of all the students who are taking **Database Programming** regardless of case.

```
SELECT fname, lname FROM mendoza_student WHERE ssn IN
(SELECT ssn FROM mendoza_student_class WHERE class_code IN
(SELECT class_code FROM mendoza_class WHERE LOWER(class_description) ='database programming'));
```

	FNAME	LNAME
✓	Abraham	Bennet
✓	Johnson	White
✓	Innes	del Castillo

Page 1 of 1 |< < > >| (1-3 of 3 rows)

2 Using a single SQL statement display all the rows from the **student_class** table where class description is not null

```
SELECT * FROM MENDOZA_STUDENT_CLASS WHERE CLASS_CODE IN
(SELECT CLASS_CODE FROM MENDOZA_CLASS WHERE CLASS_DESCRIPTION IS NOT NULL);
```

	SSN	CLASS_CODE
✓	409-56-7008	37
✓	172-32-1176	37
✓	712-45-1867	37
✓	998-72-3567	3
✓	672-71-3249	3
✓	213-46-8915	32
✓	472-27-2349	32
✓	846-92-7186	32
✓	427-17-2319	34
✓	267-41-2394	34

Page 1 of 1 |< < > >| (1-10 of 10 rows)

3 Using a single SQL statement display fname, lname of all the students whose first name is **anything**

except John, Jack or Bob. and are taking the operating systems class and their phone number is null

```
SELECT fname, lname FROM MENDOZA_STUDENT WHERE fname NOT IN ('John', 'Jack', 'Bob') AND PHONE IS NULL AND ssn IN
(SELECT ssn FROM MENDOZA_STUDENT_CLASS WHERE CLASS_CODE IN
(SELECT CLASS_CODE FROM MENDOZA_CLASS WHERE LOWER(CLASS_DESCRIPTION) = 'operating systems'));
```

no rows selected

```
SELECT fname, lname FROM MENDOZA_STUDENT WHERE fname NOT IN ('John', 'Jack', 'Bob') AND PHONE IS NULL AND ssn IN
(SELECT ssn FROM MENDOZA_STUDENT_CLASS WHERE CLASS_CODE IN
(SELECT CLASS_CODE FROM MENDOZA_CLASS WHERE LOWER(CLASS_DESCRIPTION) = 'operating systems'));
```

Script Output x Query Result x

SQL | All Rows Fetched: 0 in 0.036 seconds

FNAME LNAME

- 4 Using a single SQL statement display ssn, fname, lname, age/2 of all the students whose first name begins with the letter J and age is greater than 25 and are taking any class that contains 'Intro' in its description (Have to convert the dob into a number). Order the results by age/2 in descending order. Use an alias for the order by clause

```
SELECT ssn, fname, TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) / 2 age
FROM mendoza_student WHERE UPPER(fname) LIKE 'J%' AND TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) > 25 AND ssn IN
(SELECT ssn FROM mendoza_student_class WHERE class_code IN
(SELECT class_code FROM mendoza_class WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age DESC;
```

```
SELECT ssn, fname, TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) / 2 age
FROM mendoza_student WHERE UPPER(fname) LIKE 'J%' AND TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) > 25 AND ssn IN
(SELECT ssn FROM mendoza_student_class WHERE class_code IN
(SELECT class_code FROM mendoza_class WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age DESC;
```

Script Output x Query Result x

SQL | All Rows Fetched: 0 in 0.032 seconds

SSN FNAME AGE

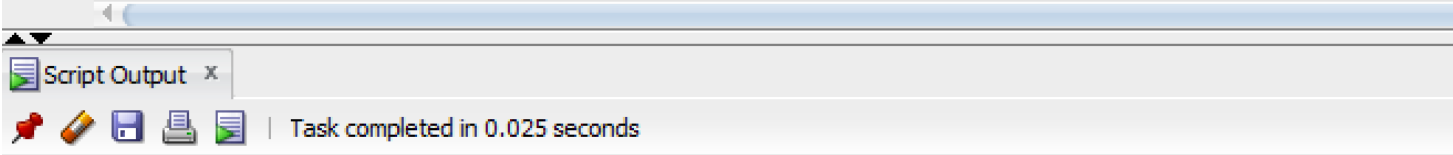
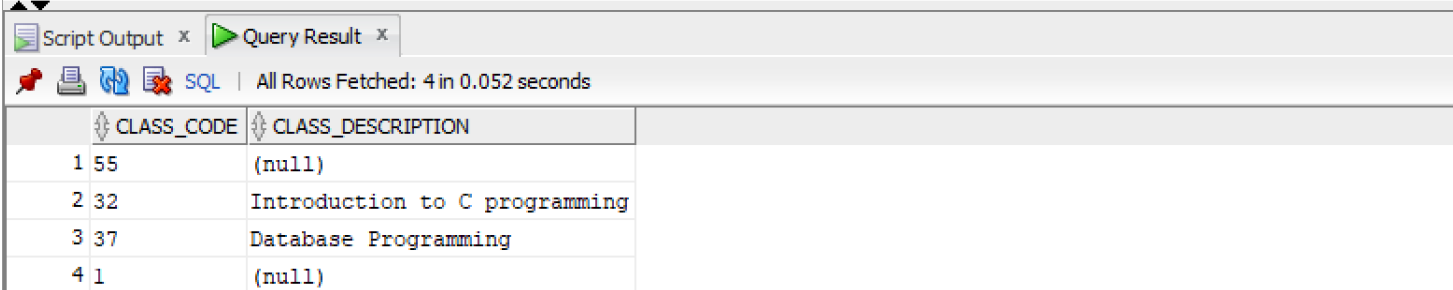
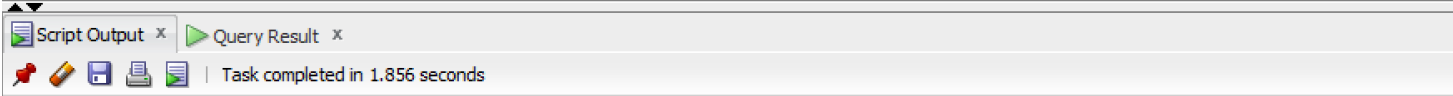
- 5 Using a single SQL statement display fname, lname from the **student** table where last name contains the letters 'nn' (e.g. Benny, Bonny, Sonny) and is enrolled in any class that contains the letter 'h' in its description regardless of case. Order the results by lname. When using order by use the position and not the name of the column

```
SELECT ssn, fname, lname, TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) / 2 age
FROM mendoza_student WHERE UPPER(fname) LIKE 'J%' AND TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) > 25 AND ssn IN
(SELECT ssn FROM mendoza_student_class WHERE class_code IN
(SELECT class_code FROM mendoza_class WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age DESC;
```

Script Output x Query Result x

SQL | All Rows Fetched: 0 in 0.036 seconds

SSN FNAME LNAME AGE

6	Using a single SQL statement, delete all the rows from the class table for all classes that are associated with students who live in Sacramento and earn less than 15000 (NOTE: you are deleting from the class table)										
	<pre>DELETE FROM mendoza_class WHERE class_code IN (SELECT class_code FROM mendoza_student_class WHERE ssn IN (SELECT ssn FROM mendoza_student WHERE LOWER(city) = 'sacramento' AND salary < 15000));</pre>  <p>0 rows deleted.</p>										
7	Using a single SQL statement use a combination of create and select to create a new table called class2 that contains the list of all the classes that are taken by students who are older than 30 years old										
	<pre>CREATE TABLE mendoza_class2 AS SELECT class_code, class_description FROM mendoza_class WHERE class_code IN (SELECT class_code FROM mendoza_student_class WHERE ssn IN (SELECT ssn FROM mendoza_student WHERE TRUNC(MONTHS_BETWEEN(SYSDATE, dob) / 12) > 30));</pre>  <table border="1"> <thead> <tr> <th>CLASS_CODE</th><th>CLASS_DESCRIPTION</th></tr> </thead> <tbody> <tr> <td>1 55</td><td>(null)</td></tr> <tr> <td>2 32</td><td>Introduction to C programming</td></tr> <tr> <td>3 37</td><td>Database Programming</td></tr> <tr> <td>4 1</td><td>(null)</td></tr> </tbody> </table>	CLASS_CODE	CLASS_DESCRIPTION	1 55	(null)	2 32	Introduction to C programming	3 37	Database Programming	4 1	(null)
CLASS_CODE	CLASS_DESCRIPTION										
1 55	(null)										
2 32	Introduction to C programming										
3 37	Database Programming										
4 1	(null)										
8	Update the salary to 75000 for all students who are enrolled in 'Database programming' regardless of case and live in CA										
	<pre>UPDATE mendoza_student SET salary = 75000 WHERE ssn IN (SELECT ssn FROM mendoza_student_class WHERE class_code IN (SELECT class_code FROM mendoza_class WHERE UPPER(class_description) = 'DATABASE PROGRAMMING' AND UPPER(state) = 'CA'));</pre>  <p>1 rows updated.</p>										