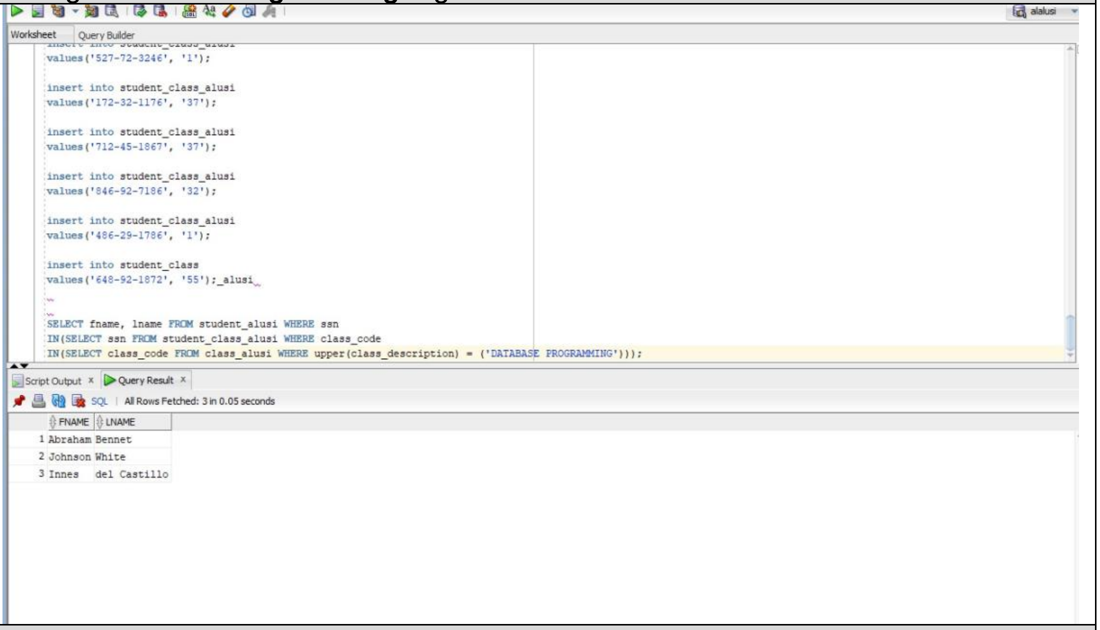
Youser Alalusi

# ***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

| | |
|---|---|
| 1 | **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. |

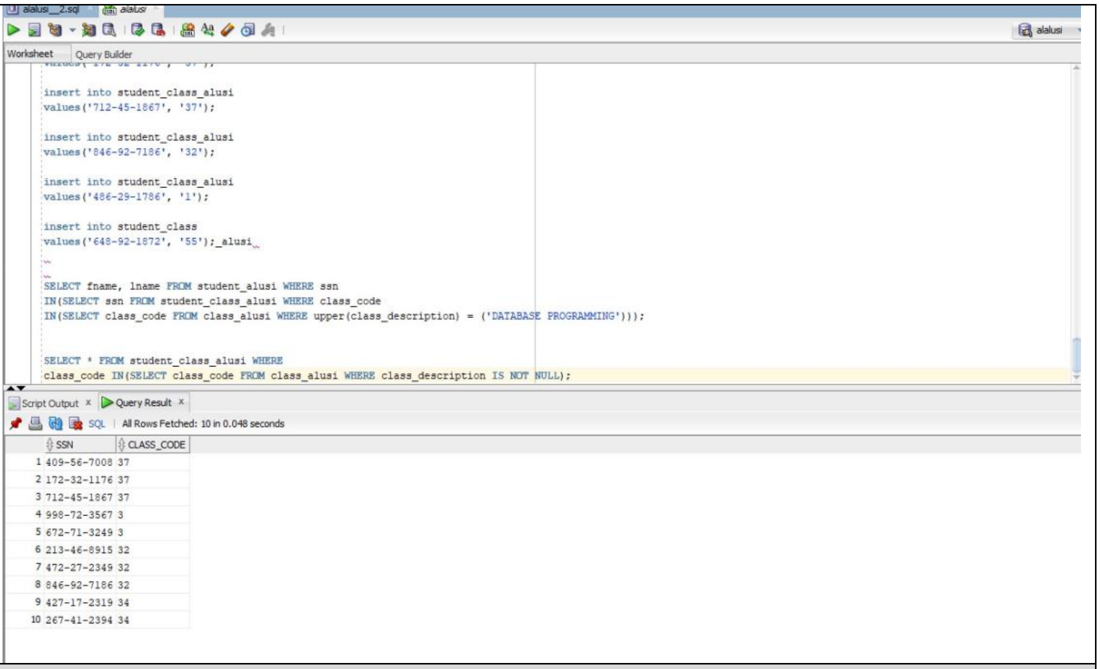


```
insert into student_class_alusi
values('527-72-3246', '1');

insert into student_class_alusi
values('172-32-1176', '37');

insert into student_class_alusi
values('712-45-1867', '37');

insert into student_class_alusi
values('846-92-7186', '32');

insert into student_class_alusi
values('486-29-1786', '1');

insert into student_class
values('648-92-1872', '55');_alusi


SELECT fname, lname FROM student_alusi WHERE ssn
IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('DATABASE PROGRAMMING')));
```

All Rows Fetched: 3 in 0.05 seconds

```
  FNAME   LNAME
1 Abraham Bennet
2 Johnson White
3 Innes   del Castillo
```

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



```
insert into student_class_alusi
values('712-45-1867', '37');

insert into student_class_alusi
values('846-92-7186', '32');

insert into student_class_alusi
values('486-29-1786', '1');

insert into student_class
values('648-92-1872', '55');_alusi


SELECT fname, lname FROM student_alusi WHERE ssn
IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('DATABASE PROGRAMMING')));


SELECT * FROM student_class_alusi WHERE
class_code IN(SELECT class_code FROM class_alusi WHERE class_description IS NOT NULL);
```

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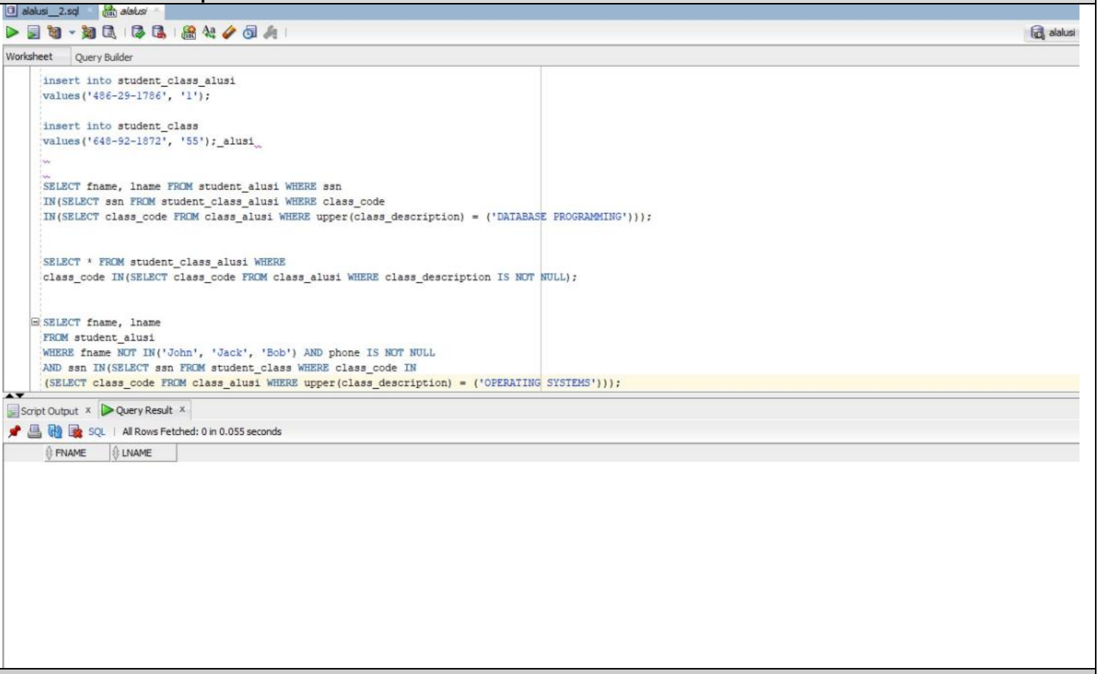
```
   SSN         CLASS_CODE
 1 409-56-7008 37
 2 172-32-1176 37
 3 712-45-1867 37
 4 998-72-3567 3
 5 672-71-3249 3
 6 213-46-8915 32
 7 472-27-2349 32
 8 846-92-7186 32
 9 427-17-2319 34
10 267-41-2394 34
```

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

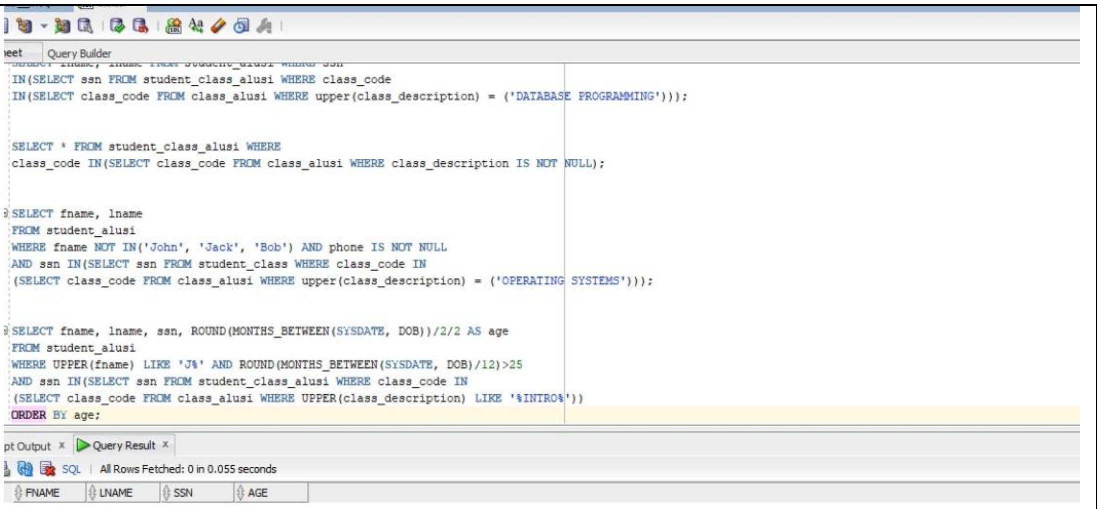


```
insert into student_class_alusi
values('486-29-1786', '1');

insert into student_class
values('648-92-1872', '55');_alusi


SELECT fname, lname FROM student_alusi WHERE ssn
IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('DATABASE PROGRAMMING')));


SELECT * FROM student_class_alusi WHERE
class_code IN(SELECT class_code FROM class_alusi WHERE class_description IS NOT NULL);


SELECT fname, lname
FROM student_alusi
WHERE fname NOT IN('John', 'Jack', 'Bob') AND phone IS NOT NULL
AND ssn IN(SELECT ssn FROM student_class WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('OPERATING SYSTEMS')));
```

All Rows Fetched: 0 in 0.055 seconds

```
   FNAME   LNAME
```

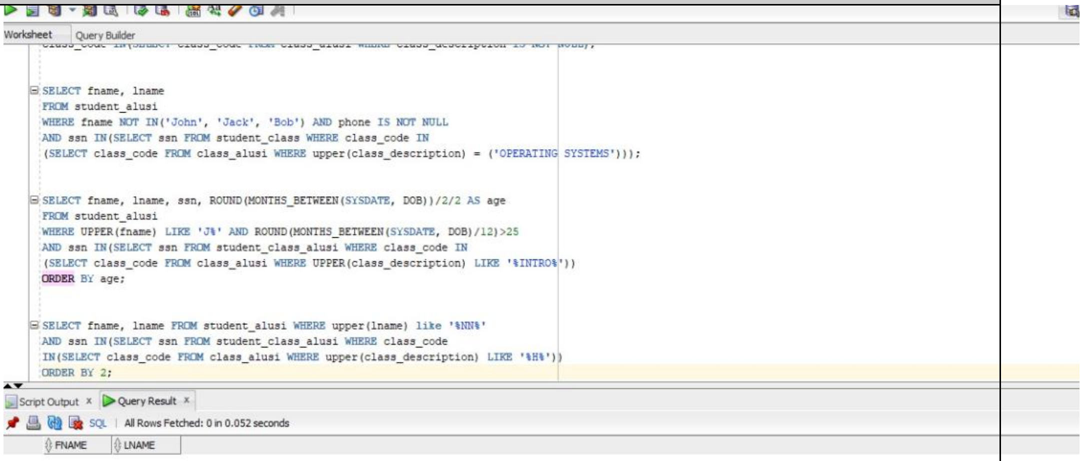
4 Using a single SQL statement display ssn, fname, lname, age/2 of all the students whose first name begins with the letter J and age is greater than 25 and are taking any class that contains '**Intro**' in its description (Have to convert the dob into a number). Order the results by age/2 in descending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



```
SELECT fname, lname FROM student_alusi WHERE ssn
IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('DATABASE PROGRAMMING')));


SELECT * FROM student_class_alusi WHERE
class_code IN(SELECT class_code FROM class_alusi WHERE class_description IS NOT NULL);


SELECT fname, lname
FROM student_alusi
WHERE fname NOT IN('John', 'Jack', 'Bob') AND phone IS NOT NULL
AND ssn IN(SELECT ssn FROM student_class WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('OPERATING SYSTEMS')));


SELECT fname, lname, ssn, ROUND(MONTHS_BETWEEN(SYSDATE, DOB))/2/2 AS age
FROM student_alusi
WHERE UPPER(fname) LIKE 'J%' AND ROUND(MONTHS_BETWEEN(SYSDATE, DOB)/12)>25
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age;
```

```
All Rows Fetched: 0 in 0.055 seconds

FNAME | LNAME | SSN | 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



```
class_code IN(SELECT class_code FROM class_alusi WHERE class_description IS NOT NULL);


SELECT fname, lname
FROM student_alusi
WHERE fname NOT IN('John', 'Jack', 'Bob') AND phone IS NOT NULL
AND ssn IN(SELECT ssn FROM student_class WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('OPERATING SYSTEMS')));


SELECT fname, lname, ssn, ROUND(MONTHS_BETWEEN(SYSDATE, DOB))/2/2 AS age
FROM student_alusi
WHERE UPPER(fname) LIKE 'J%' AND ROUND(MONTHS_BETWEEN(SYSDATE, DOB)/12)>25
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age;


SELECT fname, lname FROM student_alusi WHERE upper(lname) like '%NN%'
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) LIKE '%H%'))
ORDER BY 2;
```

```
All Rows Fetched: 0 in 0.052 seconds

FNAME | LNAME
```

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)

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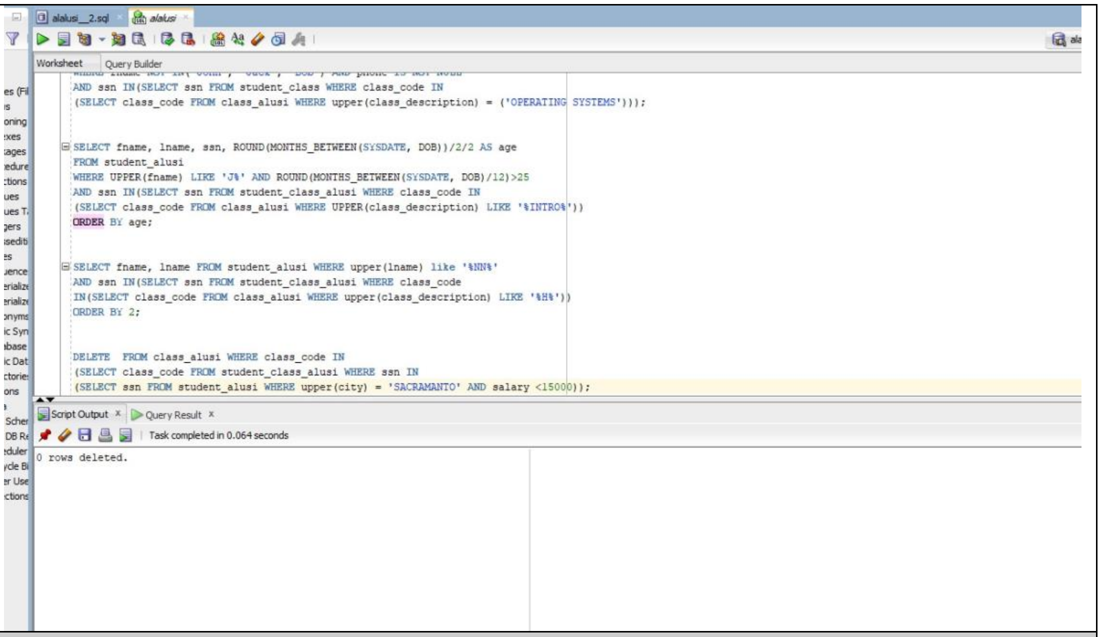
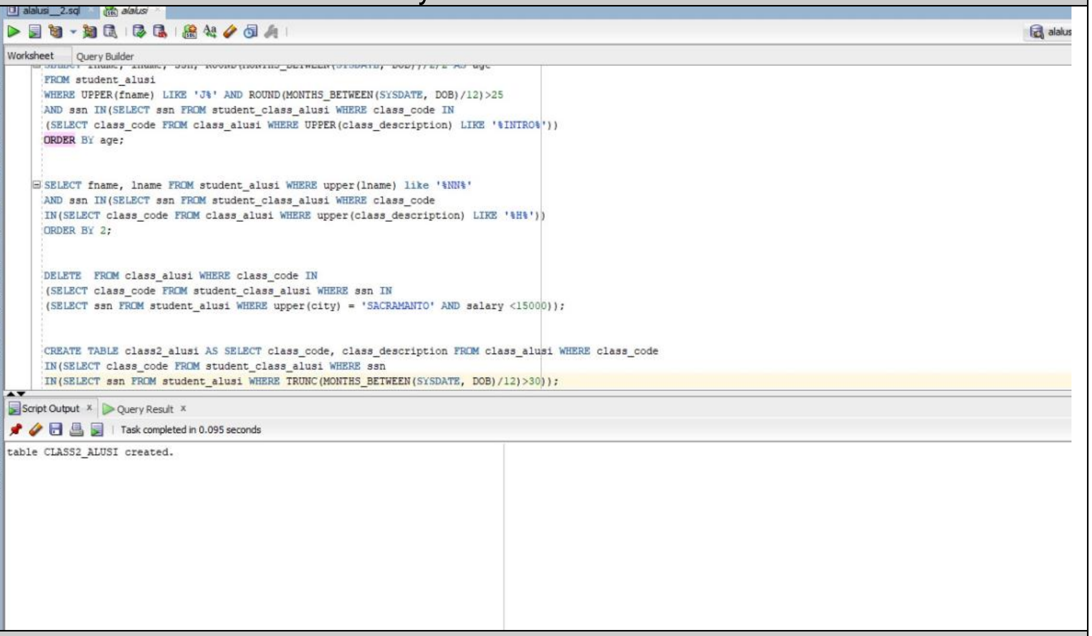


```
AND ssn IN(SELECT ssn FROM student_class WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE upper(class_description) = ('OPERATING SYSTEMS')));


SELECT fname, lname, ssn, ROUND(MONTHS_BETWEEN(SYSDATE, DOB))/2/2 AS age
FROM student_alusi
WHERE UPPER(fname) LIKE 'J%' AND ROUND(MONTHS_BETWEEN(SYSDATE, DOB)/12)>25
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age;


SELECT fname, lname FROM student_alusi WHERE upper(lname) like '%NN%'
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) LIKE '%H%'))
ORDER BY 2;


DELETE  FROM class_alusi WHERE class_code IN
(SELECT class_code FROM student_class_alusi WHERE ssn IN
(SELECT ssn FROM student_alusi WHERE upper(city) = 'SACRAMANTO' AND salary <15000));
```

```
0 rows deleted.
```

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



```
FROM student_alusi
WHERE UPPER(fname) LIKE 'J%' AND ROUND(MONTHS_BETWEEN(SYSDATE, DOB)/12)>25
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code IN
(SELECT class_code FROM class_alusi WHERE UPPER(class_description) LIKE '%INTRO%'))
ORDER BY age;


SELECT fname, lname FROM student_alusi WHERE upper(lname) like '%NN%'
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) LIKE '%H%'))
ORDER BY 2;


DELETE  FROM class_alusi WHERE class_code IN
(SELECT class_code FROM student_class_alusi WHERE ssn IN
(SELECT ssn FROM student_alusi WHERE upper(city) = 'SACRAMANTO' AND salary <15000));


CREATE TABLE class2_alusi AS SELECT class_code, class_description FROM class_alusi WHERE class_code
IN(SELECT class_code FROM student_class_alusi WHERE ssn
IN(SELECT ssn FROM student_alusi WHERE TRUNC(MONTHS_BETWEEN(SYSDATE, DOB)/12)>30));
```

```
table CLASS2_ALUSI created.
```

8 Update the salary to 75000 for all students who are enrolled in ‘Database programming’ regardless of case and live in CA

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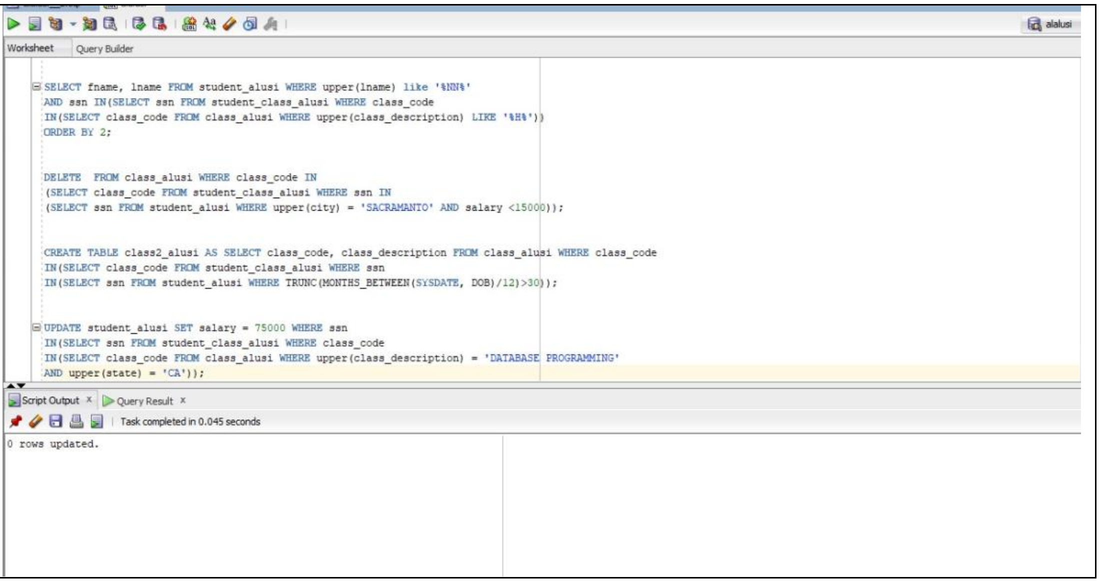

```
SELECT fname, lname FROM student_alusi WHERE upper(lname) like '%NN%'
AND ssn IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) LIKE '%H%'))
ORDER BY 2;


DELETE  FROM class_alusi WHERE class_code IN
(SELECT class_code FROM student_class_alusi WHERE ssn IN
(SELECT ssn FROM student_alusi WHERE upper(city) = 'SACRAMANTO' AND salary <15000));


CREATE TABLE class2_alusi AS SELECT class_code, class_description FROM class_alusi WHERE class_code
IN(SELECT class_code FROM student_class_alusi WHERE ssn
IN(SELECT ssn FROM student_alusi WHERE TRUNC(MONTHS_BETWEEN(SYSDATE, DOB)/12)>30));


UPDATE student_alusi SET salary = 75000 WHERE ssn
IN(SELECT ssn FROM student_class_alusi WHERE class_code
IN(SELECT class_code FROM class_alusi WHERE upper(class_description) = 'DATABASE PROGRAMMING'
AND upper(state) = 'CA'));
```

Task completed in 0.045 seconds

```
0 rows updated.
```