

## **ASSIGNMENT 6**

### **Insert/Delete/Truncate/Drop**

In this lab you will use SQL statements that fall in both the DDL and DML category. In this lab you will be storing new information in the database. You will be using the tables from your previous assignment as such: (Make sure that your tables contain the following columns along with the appropriate constraints)

#### **Student**

SSN      primary key  
lname  
fname  
dob  
salary    check > 10000  
(lname and fname are a composite candidate key)

#### **Class**

Class code      primary key  
Class description    (Create an index on this column using the create index command)

#### **Student\_class**

SSN              Foreign key  
Class Code      Foreign key  
(SSN and class code are a composite primary key)

**You must execute the statements in the order in which the questions are being asked.**

Suggestions:

- 1) Do not create a spool file. This lab will probably take several days. Since you cannot guarantee that the work that you did on my home computer or the lab computers on campus will be there the next time you open up the SQLPlus session, I would make the following suggestion: Store all your SQL statements in a text file. Then you can just copy and paste your SQL statements into the SQLPlus session and get back to where you left off.
- 2) I would also suggest that you drop all your tables in the beginning of the text file just in case the tables are still there so that you don't get any error messages

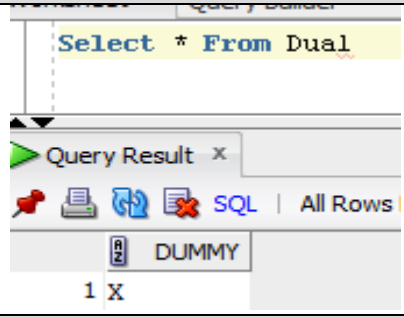
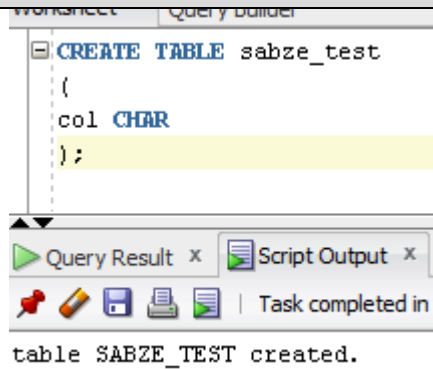
**All the tables that you create should be prefixed with the first five letters of your lastname such as sabze\_patient**

What to turn in:

- 1) You will turn in this word document only. I do not want any other files
- 2) Paste a printscreen of either the **SQLPlus session** or **SQL Developer** showing only the SQL command and the results from the database engine. Some of the SQL statements that you issue may cause an error and may actually be the expected result. Do not assume that just because you are not getting an error message, everything is okay.
- 3) When typing in your SQL statements, make sure that the **keywords** are all in **uppercase**. The identifiers that you come up with such as **table names, column names or constraint names** should all be in **lower case**.
- 4) Make sure that you prefix your table names with the **first five letters of your last name**.
- 5) Make sure that you **only provide a printscreen of the snippet that pertains to the question (NOTHING MORE)**.

Suggestion: you can use the snipping tool in windows 7 or you can download this open source program <http://getgreenshot.org/> for printscreens. Provide only the printscreen

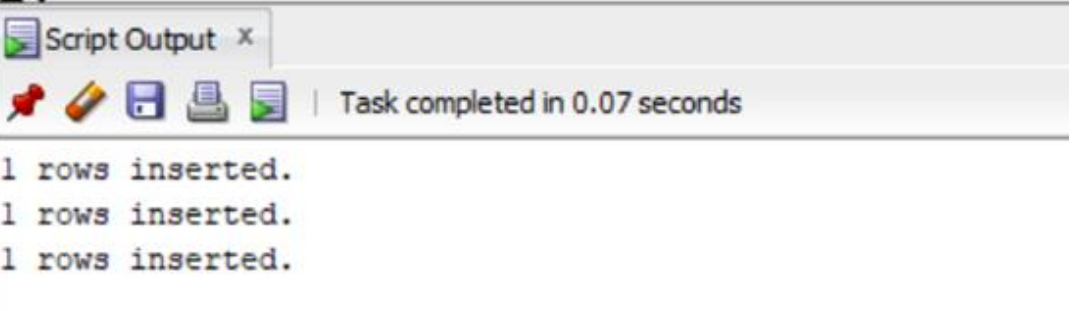
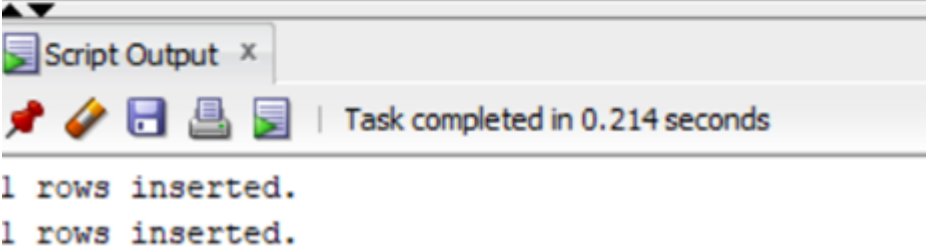
that pertains to the question. I do not want to see your trial and errors or things that pertain to other questions.

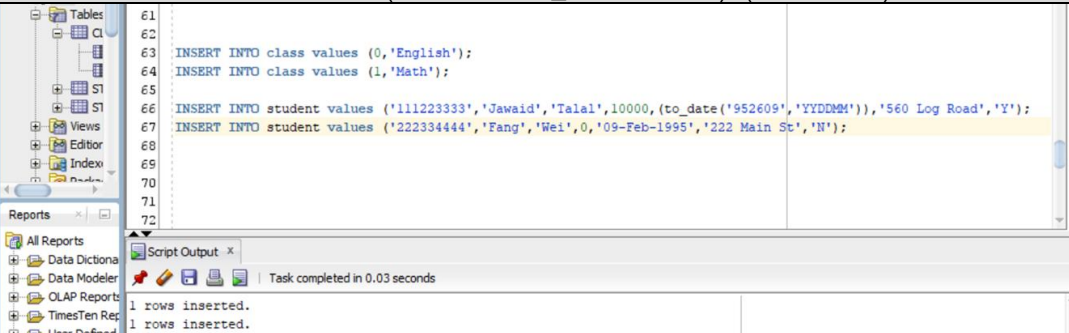
SQLPlus or SQLDeveloper (Your choice)	
Example	Display the contents of the dual table
	<div> <pre>SQL&gt; SELECT * FROM dual; D - X 1 row selected.</pre> </div> <div>OR</div> <div>  </div>
Next Example	Create a table called test
	<div> <pre>SQL&gt; CREATE TABLE sabze_test 2 ( 3 col CHAR 4 ); Table created.</pre> </div> <div>OR</div> <div>  </div>

**All the tables that you create must be prefixed with the first five letters of your last name such as sabze\_student.**

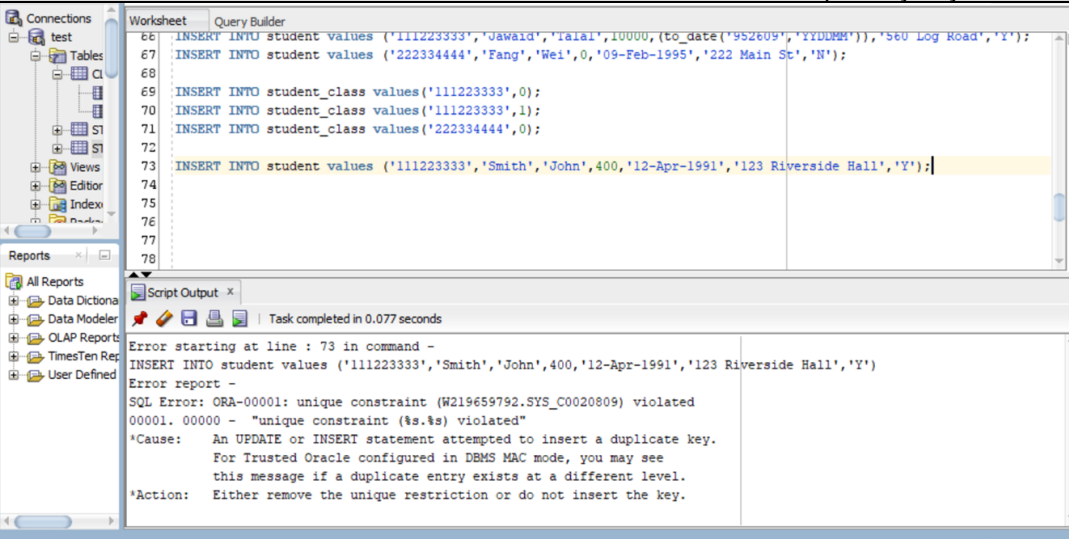
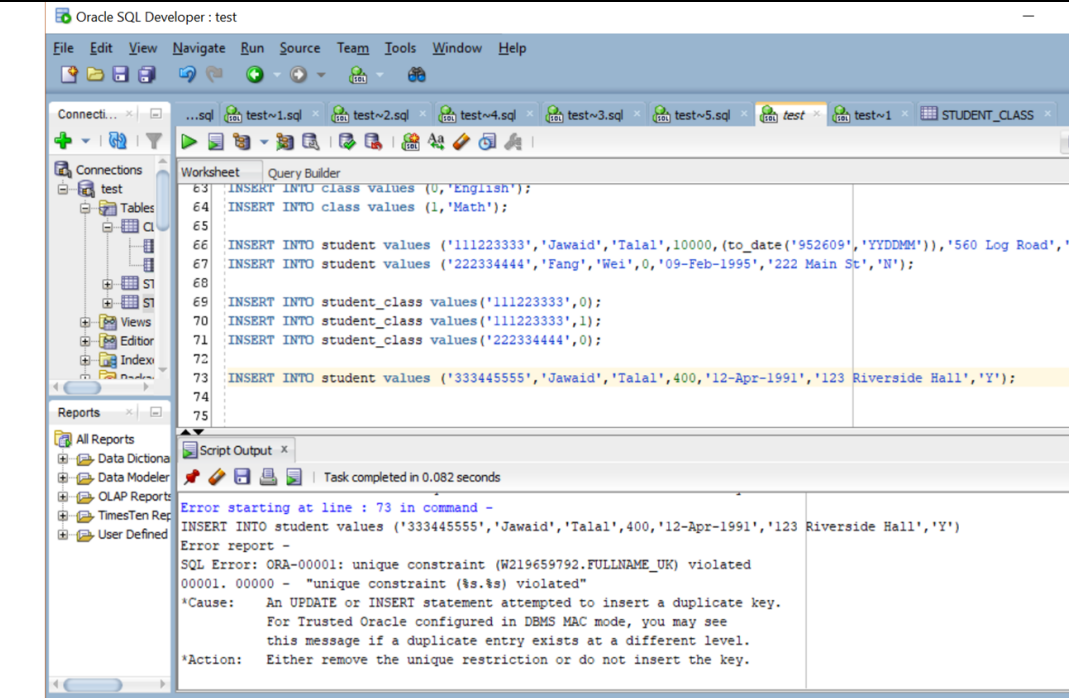
The order in which you insert data into your tables is different from the order in which the questions have been asked. **Questions 1a, 1b and 1c should not give you any error messages**

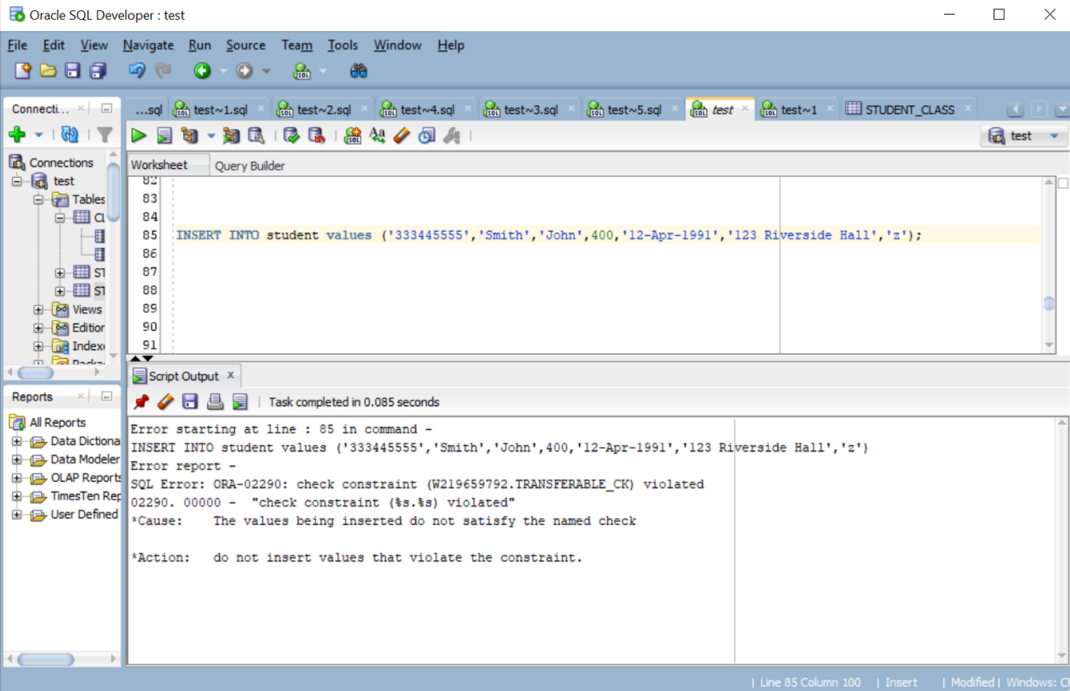
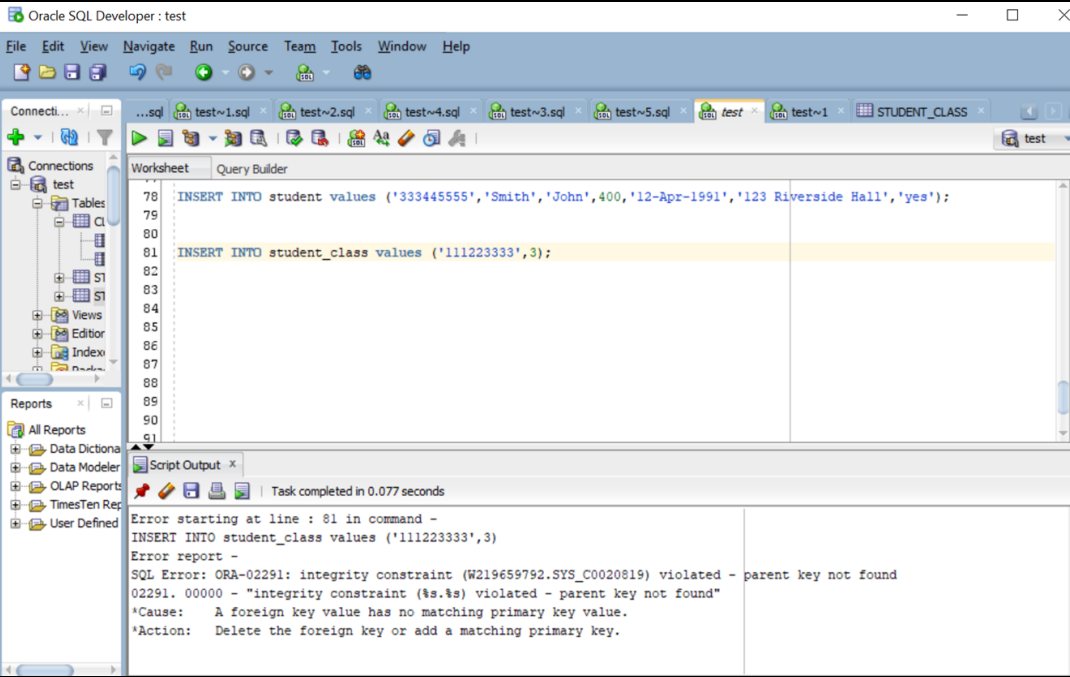
1A	Insert three rows of valid data into the <b>student_class</b> table
----	---

	<pre> 68 69  INSERT INTO student_class values('111223333',0); 70  INSERT INTO student_class values('111223333',1); 71  INSERT INTO student_class values('222334444',0); 72 73    74 75 76 77 78 79 80 </pre> 
1B	<p><b>Insert</b> two rows of valid data into the <b>class</b> table according to the following. Make sure that you provide a value for every column.</p>
	<pre> 63  INSERT INTO class values (0,'English'); 64  INSERT INTO class values (1,'Math'); 65 66 67 68 69 70 71 72 73 </pre> 
1C	<p><b>Insert</b> two rows of valid data into the <b>student</b> table according to the following. Provide a value for every column. For the 1<sup>st</sup> row:</p>

<p>Use the to_date function to insert into the DOB column in the format (yyddmm) For the 2<sup>nd</sup> row Use the default date format (Do not use to_date function) (use default)</p>	
	<p>Script Output</p> <p>Task completed in 0.03 seconds</p> <p>1 rows inserted. 1 rows inserted.</p>

Do the questions in the order in which they appear. You may get error messages which of course is valid

2A	<p><b>Insert a row of invalid data into student table such that it violates the primary key</b></p> 
2B	<p><b>Insert a row of invalid data into student table such that it violates the candidate key</b></p> 

2C	<p><b>Insert a row of invalid data into student table such that it violates a check constraint</b></p> 
2D	<p><b>Insert a row of invalid data into the <b>student_class</b> table such that it violates the foreign key to the class table</b></p> 
2E	<p><b>Insert a row of invalid data into the <b>student_class</b> table such that it violates the foreign key to the student table</b></p>

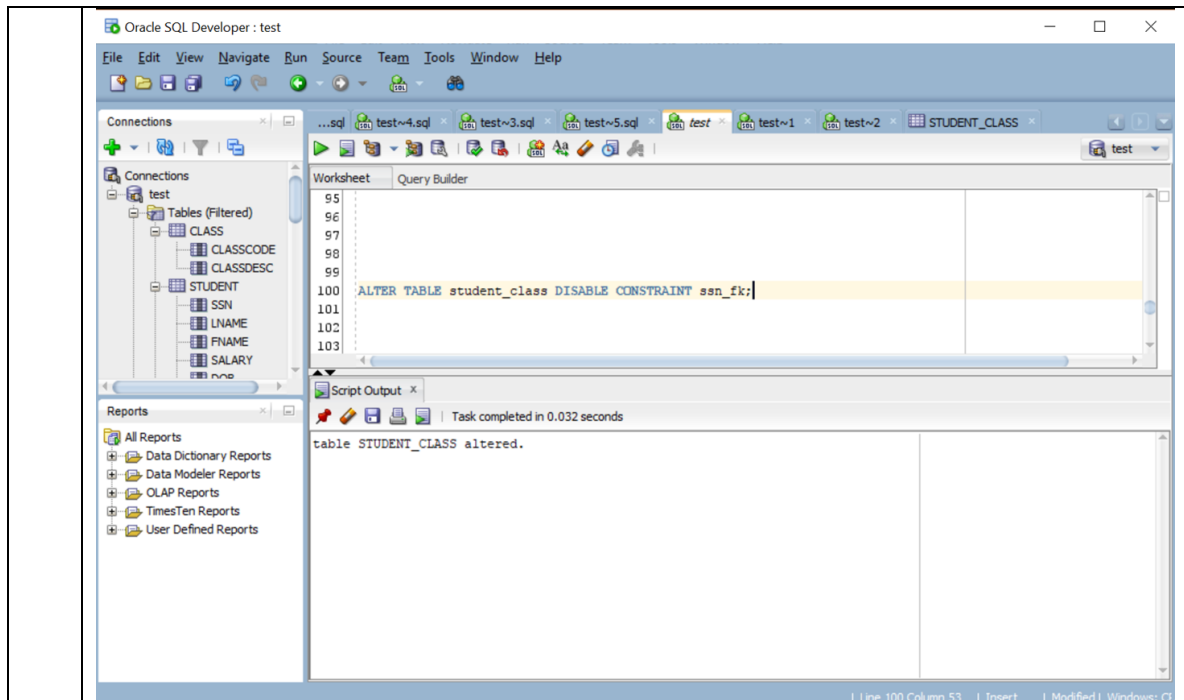
The screenshot shows the Oracle SQL Developer interface. The main window displays a SQL script with three INSERT statements. The third statement, on line 83, is highlighted in yellow and reads: `INSERT INTO student_class values ('555223333',1);`. Below the script, the Script Output pane shows an error message: "Error starting at line : 83 in command - INSERT INTO student\_class values ('555223333',1) Error report - SQL Error: ORA-02291: integrity constraint (W219659792.SYS\_C0020818) violated - parent key not found 02291. 00000 - "integrity constraint (%s.%s) violated - parent key not found" \*Cause: A foreign key value has no matching primary key value. \*Action: Delete the foreign key or add a matching primary key."

2F **Insert a row of invalid data into the `student_class` table such that it violates the primary key in the `student_class` table.**

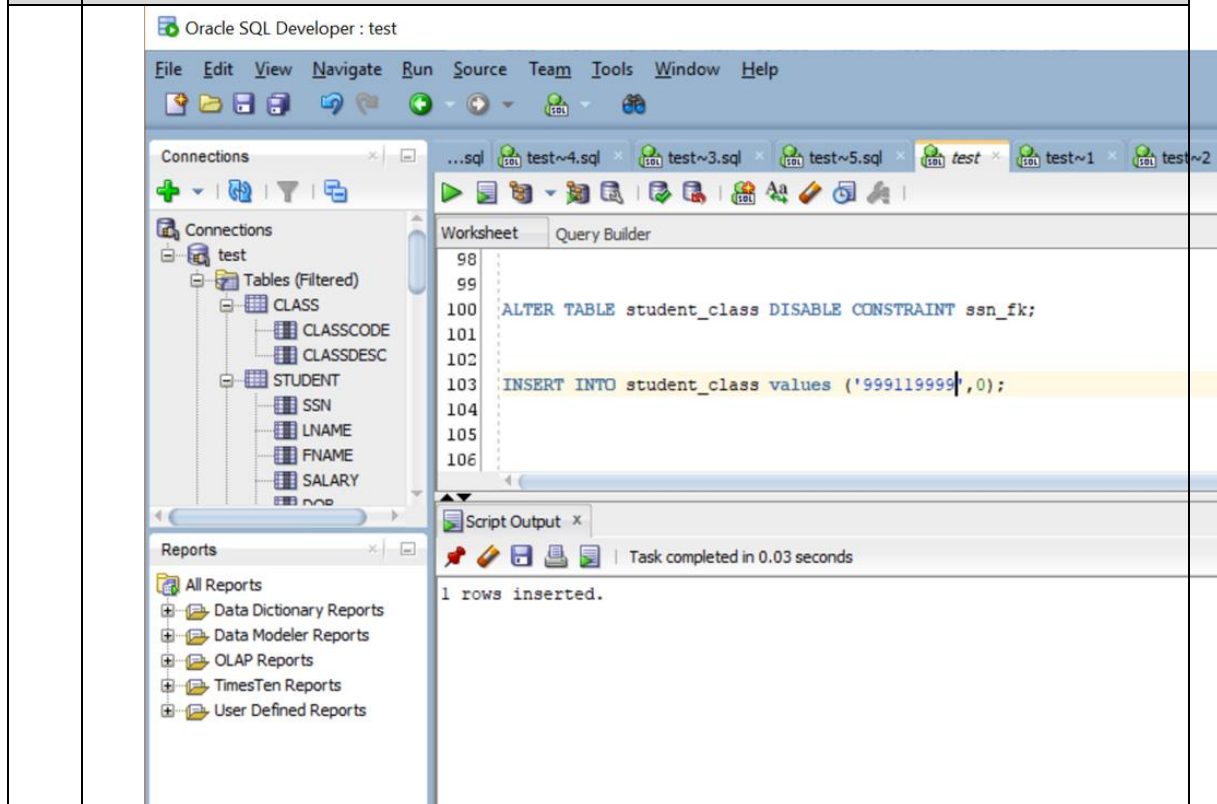
The screenshot shows the Oracle SQL Developer interface. The main window displays a SQL script with one INSERT statement on line 85, highlighted in yellow: `INSERT INTO student_class values ('111223333',0);`. Below the script, the Script Output pane shows an error message: "Error starting at line : 85 in command - INSERT INTO student\_class values ('111223333',0) Error report - SQL Error: ORA-00001: unique constraint (W219659792.SSN\_CLASSCODE\_PK) violated 00001. 00000 - "unique constraint (%s.%s) violated" \*Cause: An UPDATE or INSERT statement attempted to insert a duplicate key. For Trusted Oracle configured in DBMS MAC mode, you may see this message if a duplicate entry exists at a different level. \*Action: Either remove the unique restriction or do not insert the key."

Do the questions in the order in which they appear. You may get error messages which of course is valid

3A **Disable the foreign key constraint to the `student` table**

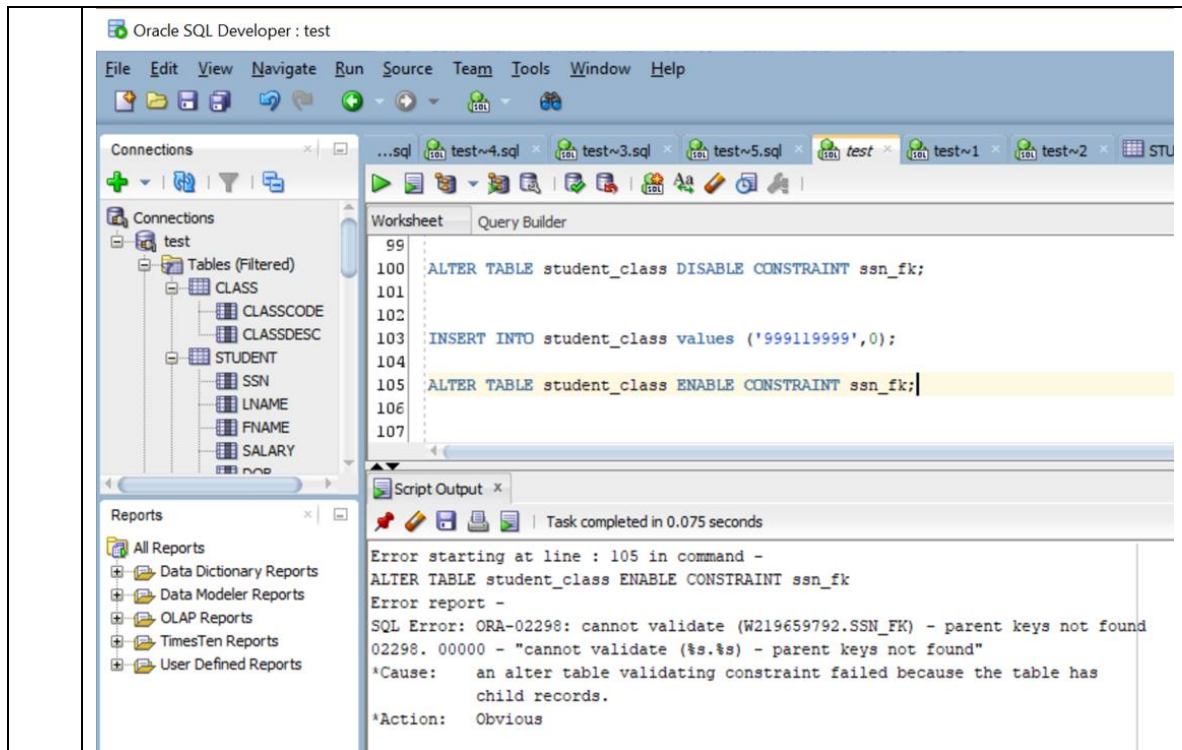


3B Insert a rows of data into the **student\_class** table such that it would violate the foreign key constraint if the above constraint to the student table was enabled



3C Enable the foreign key constraint





Do the questions in the order in which they appear. You may get error messages which of course is valid

4A **Delete** the data from the student\_class table



Oracle SQL Developer : test

FileEditViewNavigateRunSourceTeamToolsWindowHelp

Connections

Connections

test

- Tables (Filtered)
  - CLASS
    - CLASSCODE
    - CLASSDESC
  - STUDENT
    - SSN
    - LNAME
    - FNAME
    - SALARY
    - DOB

Worksheet

Query Builder

108

109DELETE FROM student\_class;

110

111

112

113

114

115

116

Script Output

Task completed in 0.035 seconds

4 rows deleted.

4BTruncate the student table

Oracle SQL Developer : test

File Edit View Navigate Run Source Team Tools Window Help

Connections

test

Tables (Filtered)

- CLASS
  - CLASSCODE
  - CLASSDESC
- STUDENT
  - SSN
  - LNAME
  - FNAME
  - SALARY
  - DOB

Reports

- All Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Worksheet

Query Builder

```
111 TRUNCATE TABLE student;  
112  
113  
114  
115  
116  
117  
118  
119
```

Script Output

Task completed in 0.163 seconds

table STUDENT truncated.

4C **drop** the index that you created on the student table

Oracle SQL Developer : test

File Edit View Navigate Run Source Team Tools Window Help

Connections

test

Tables (Filtered)

- CLASS
  - CLASSCODE
  - CLASSDESC
- STUDENT
- STUDENT\_CLASS
  - SSN
  - CLASSCODE

Views

Editing Views

Reports

All Reports

- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Worksheet

```

109 DELETE FROM student_class;
110
111 TRUNCATE TABLE student;
112
113
114
115 DROP INDEX ssn_dob_idx;
116
117
  
```

Script Output x

Task completed in 0.061 seconds

index SSN\_DOB\_IDX dropped.

4D **Drop the foreign key constraints**

Oracle SQL Developer : test

File Edit View Navigate Run Source Team Tools Window Help

Connections

test

Tables (Filtered)

- CLASS
  - CLASSCODE
- STUDENT
- STUDENT\_CLASS
  - SSN
  - CLASSCODE

Views

Editing Views

Indexes

Packages

Procedures

Functions

Reports

All Reports

- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Worksheet

```

115 DROP INDEX ssn_dob_idx;
116
117
118
119
120 ALTER TABLE student_class DROP CONSTRAINT classcode_fk;
121 ALTER TABLE student_class DROP CONSTRAINT ssn_fk;
122
123
  
```

Script Output x

Task completed in 0.045 seconds

table STUDENT\_CLASS altered.  
table STUDENT\_CLASS altered.

4E **Drop the student table.**

