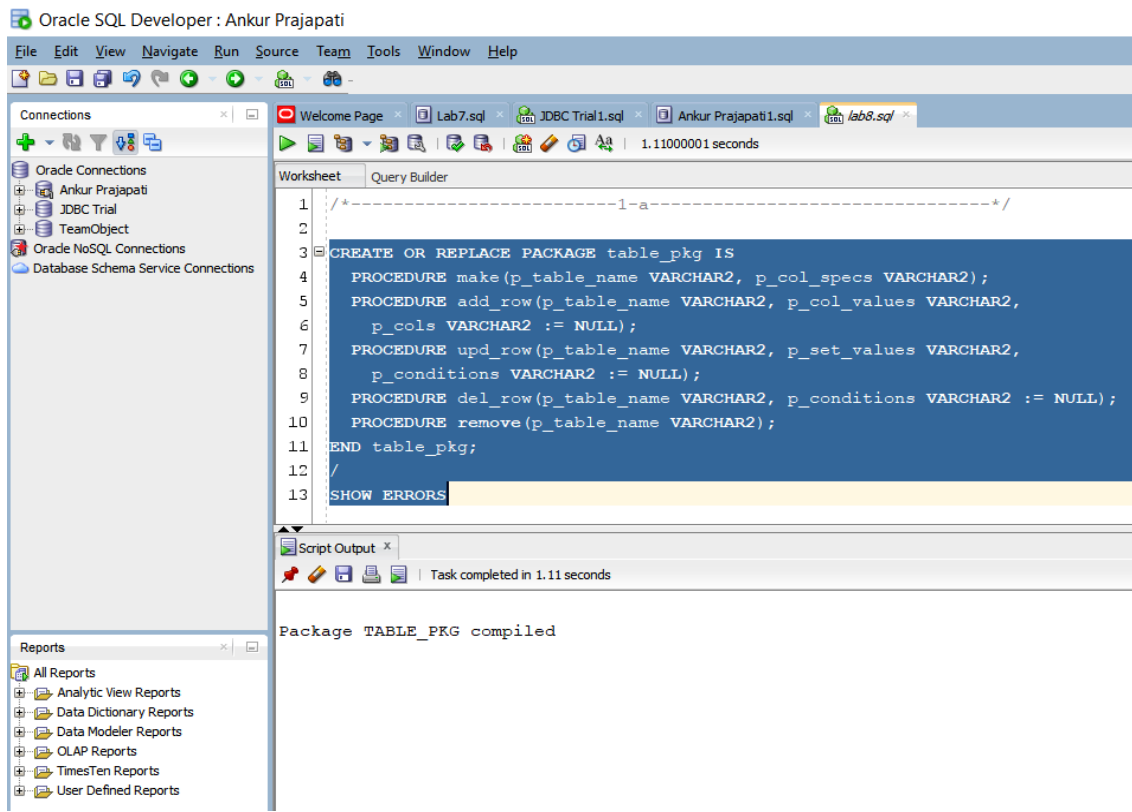
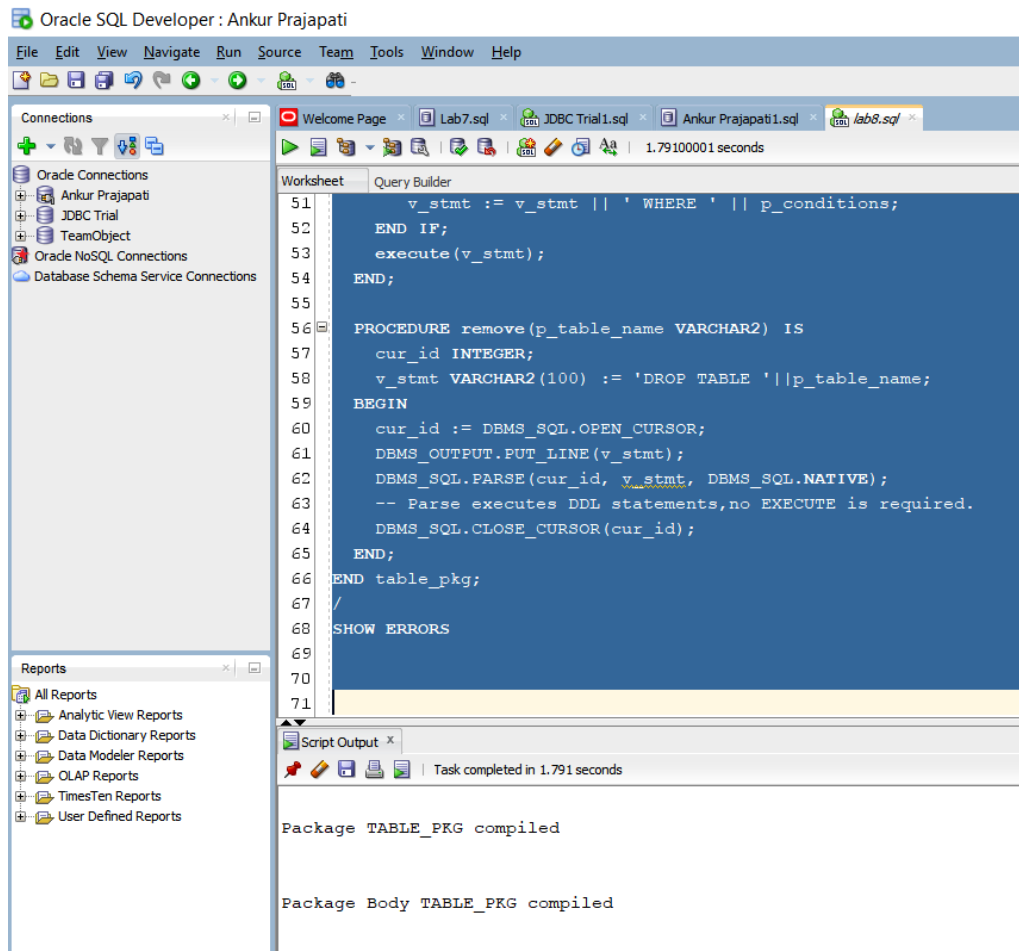


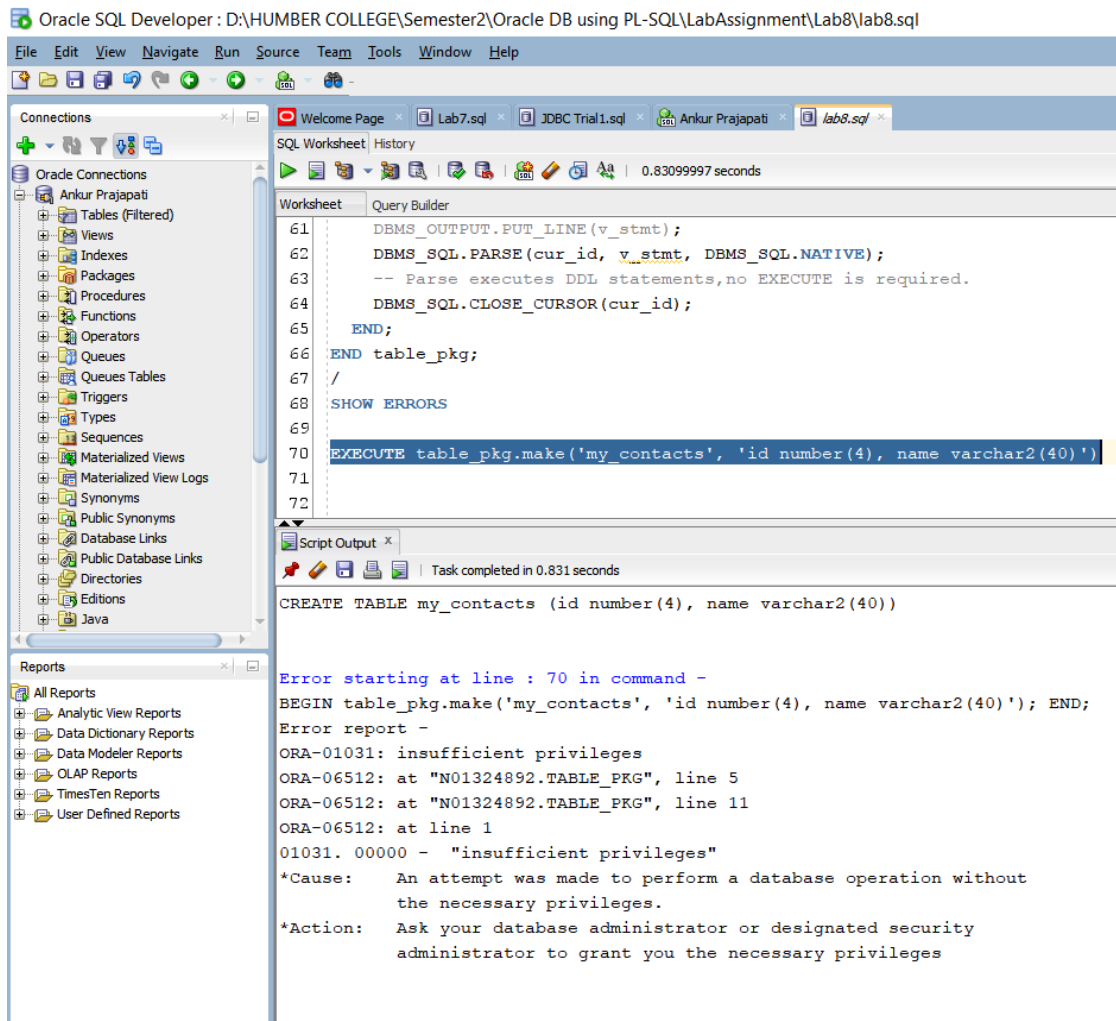
Question 1:



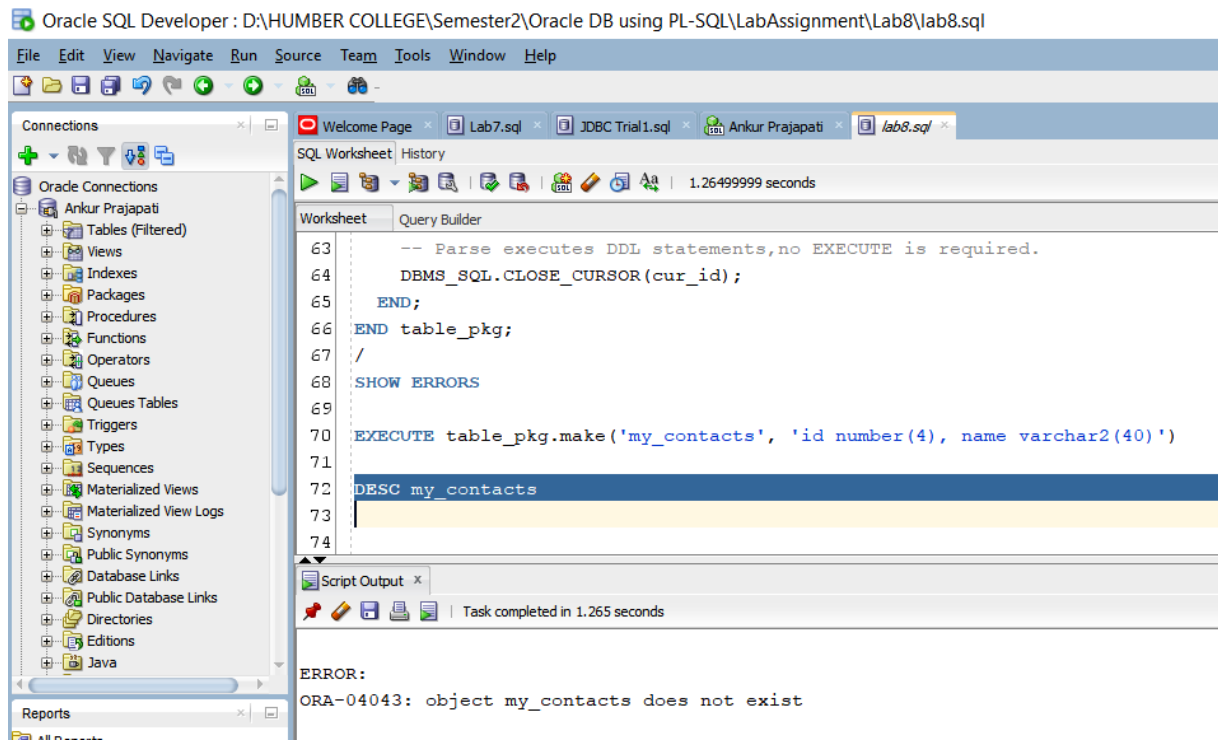
- table_pkg specification is compiled.
- Basically, we are adding 5 different procedures here.
 1. make (p_table_name, p_col_specs) → to make new table with table name and column specification
 2. add_row(p_table_name, p_col_values, p_cols) → to insert new records inside table. Basically, it takes table name, values for given columns and column names
 3. upd_row(p_table_name, p_set_valuess, p_conditions) → to update inserted rows. Basically, it takes table name, updated values and condition for updating conditions
 4. del_row() → to delete rows from table name using condition
 5. remove → to drop table name



- table_PKG body is compiled with above mentioned procedures with specifications.
- Implementation is done properly.



- Here we have tried to create new table with make procedure named my_contacts having id of type number and name of type varchar2.
- On compiling this statement, it given an error notifying that we don't have insufficient privileges. That's why we cannot create this table or perform a database operation without privileges.



- Here we are describing my_contacts but due to insufficient privileges we cannot create table and that's why it says that object does not exist.

The screenshot displays the Oracle SQL Developer interface. The title bar indicates the file path: D:\HUMBER COLLEGE\Semester2\Oracle DB using PL-SQL\LabAssignment\Lab8\lab8.sql. The main window is divided into several panes. On the left, the 'Connections' pane shows a tree view of database objects for the 'Ankur Prajapati' connection, including Tables, Views, Indexes, Packages, Procedures, Functions, Operators, Queues, Queues Tables, Triggers, Types, Sequences, Materialized Views, Materialized View Logs, Synonyms, Public Synonyms, Database Links, Public Database Links, Directories, Editions, and Java. The 'Reports' pane is also visible, showing a list of report types. The central 'Worksheet' pane contains a SQL script with the following content:

```
72 DESC my_contacts
73
74 SET SERVEROUTPUT ON
75
76 BEGIN
77   table_pkg.add_row('my_contacts','1','Lauran Serhal','','id, name');
78   table_pkg.add_row('my_contacts','2','Nancy','','id, name');
79   table_pkg.add_row('my_contacts','3','Sunitha Patel','','id,name');
80   table_pkg.add_row('my_contacts','4','Valli Pataballa','','id,name');
81 END;
82
83
```

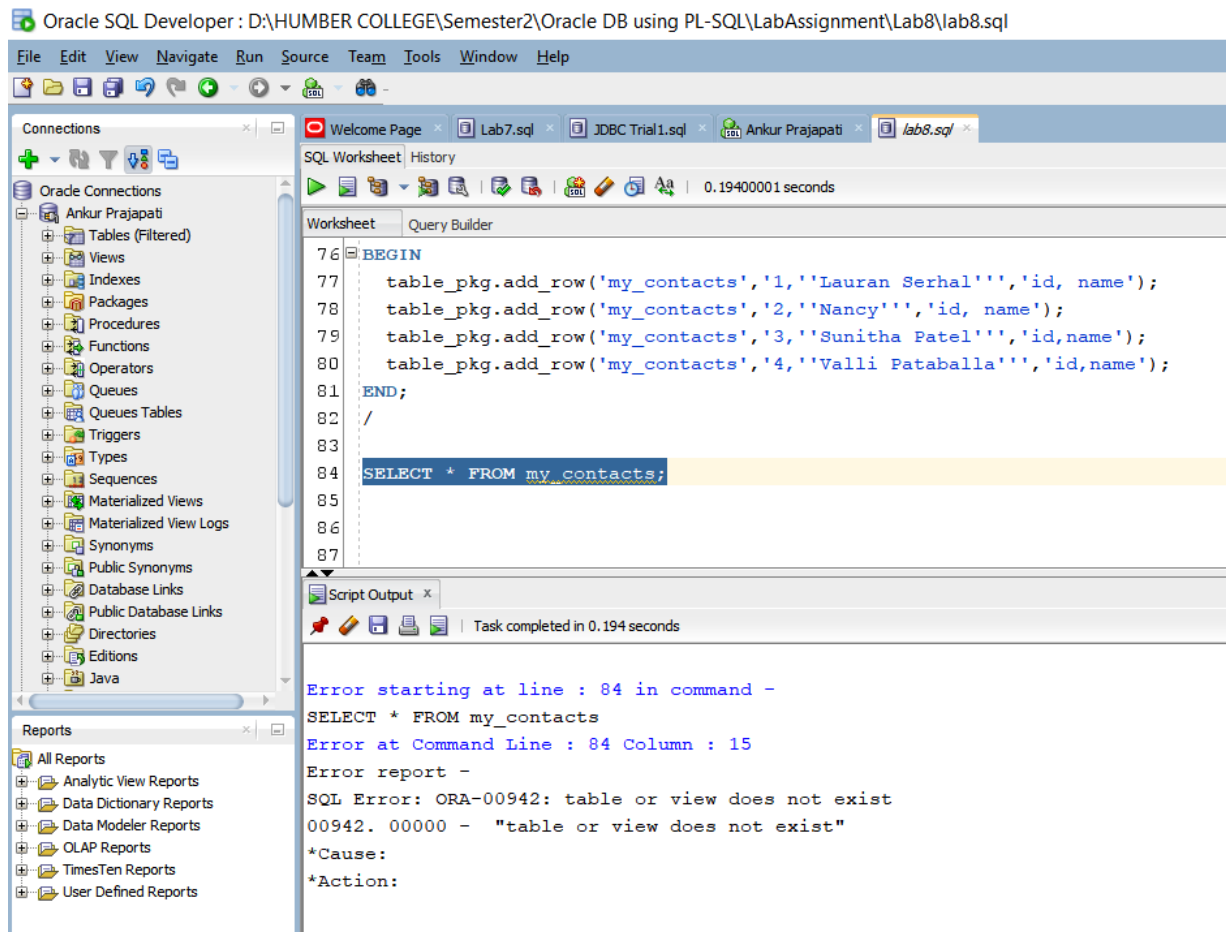
Below the script, the 'Script Output' pane shows the execution results. It indicates that the task was completed in 0.297 seconds. The output includes the following text:

```
INSERT INTO my_contacts (id, name) VALUES (1,'Lauran Serhal')
```

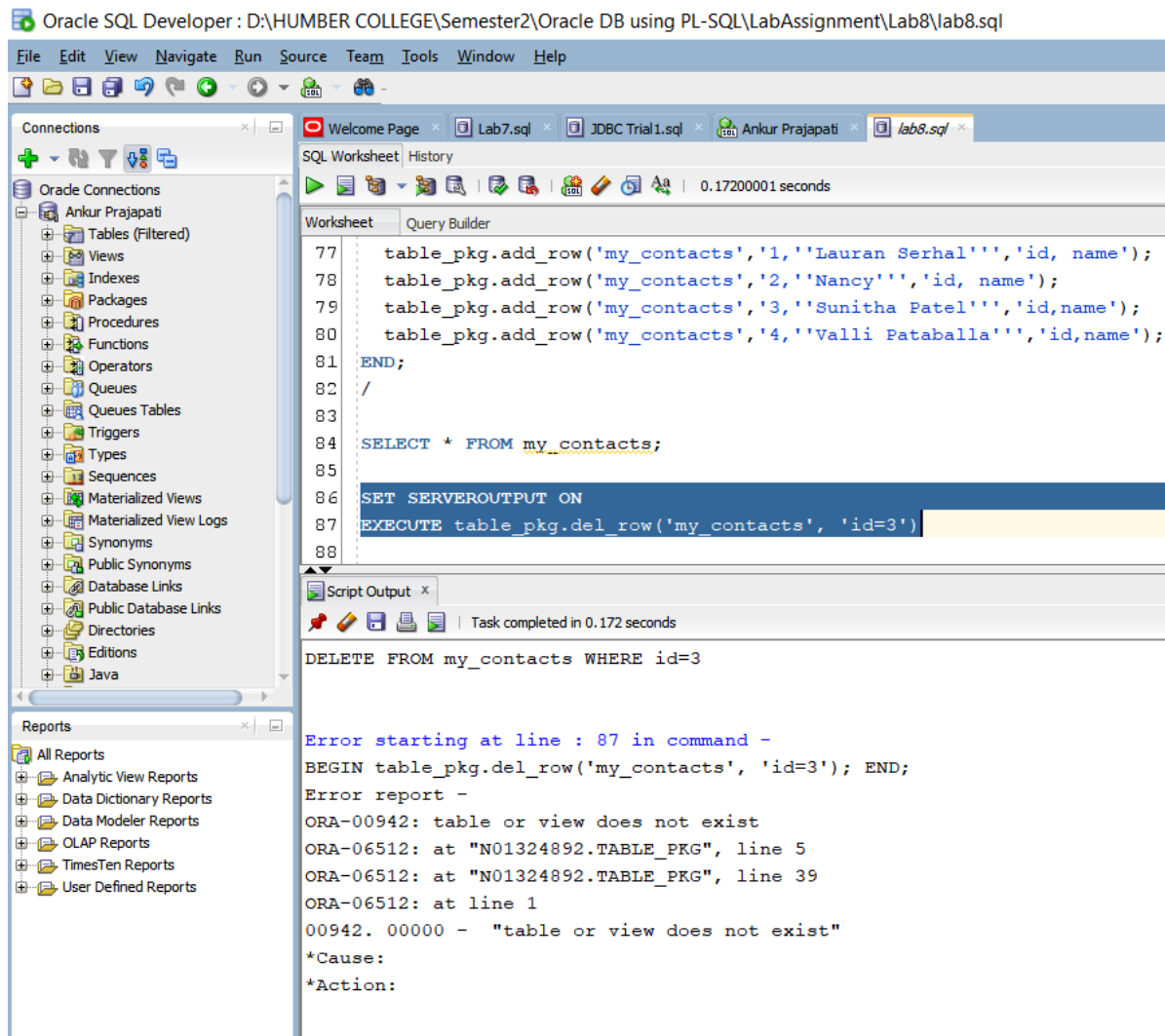
Below this, an error message is displayed:

```
Error starting at line : 76 in command -
BEGIN
  table_pkg.add_row('my_contacts','1','Lauran Serhal','','id, name');
  table_pkg.add_row('my_contacts','2','Nancy','','id, name');
  table_pkg.add_row('my_contacts','3','Sunitha Patel','','id,name');
  table_pkg.add_row('my_contacts','4','Valli Pataballa','','id,name');
END;
Error report -
ORA-00942: table or view does not exist
ORA-06512: at "N01324892.TABLE_PKG", line 5
ORA-06512: at "N01324892.TABLE_PKG", line 21
ORA-06512: at line 2
00942. 00000 - "table or view does not exist"
*Cause:
*Action:
```

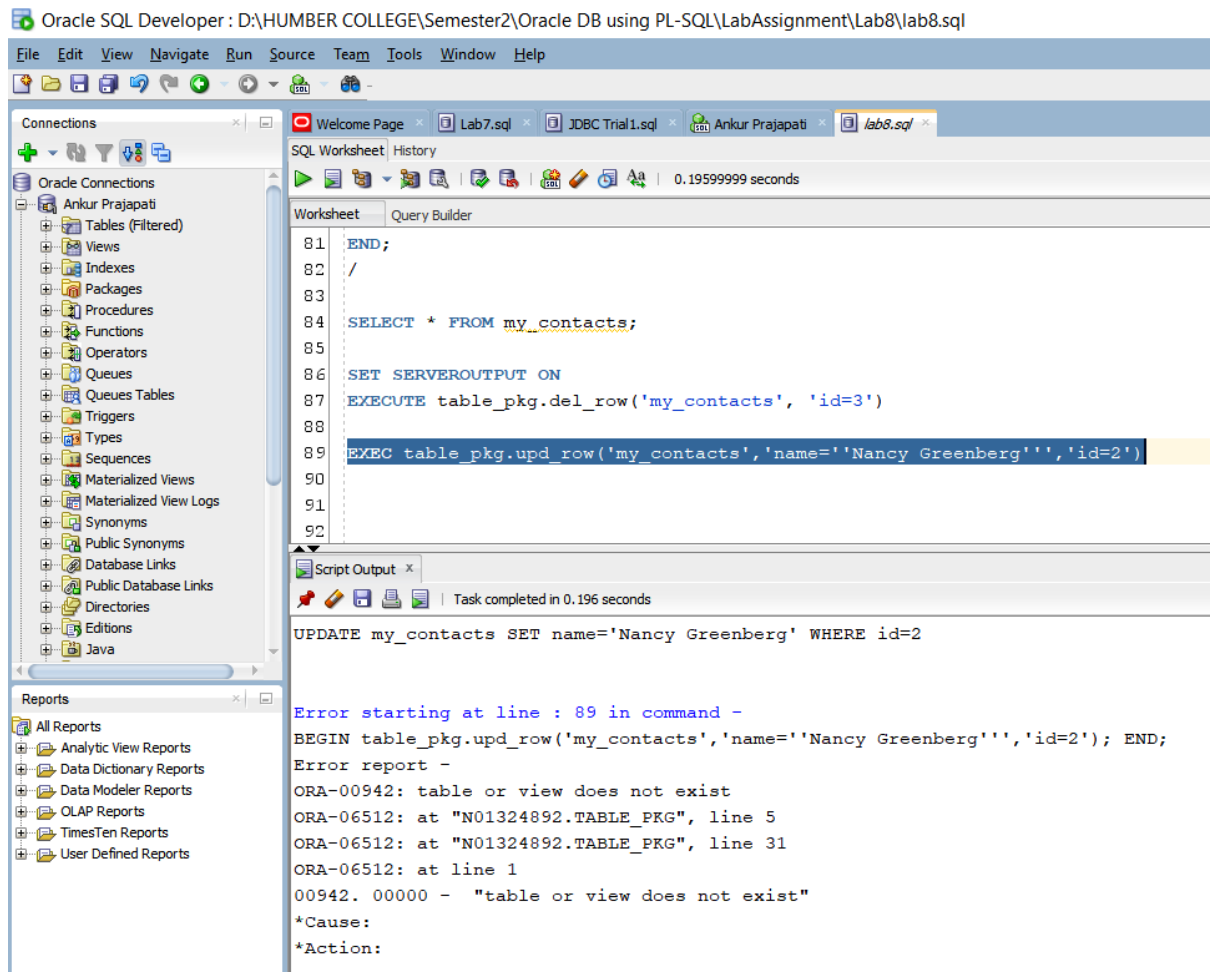
- Here we are trying to add/insert new rows in my_contacts but it doesn't exist that's why we cannot insert into table.
- We can find error table or view does not exist.



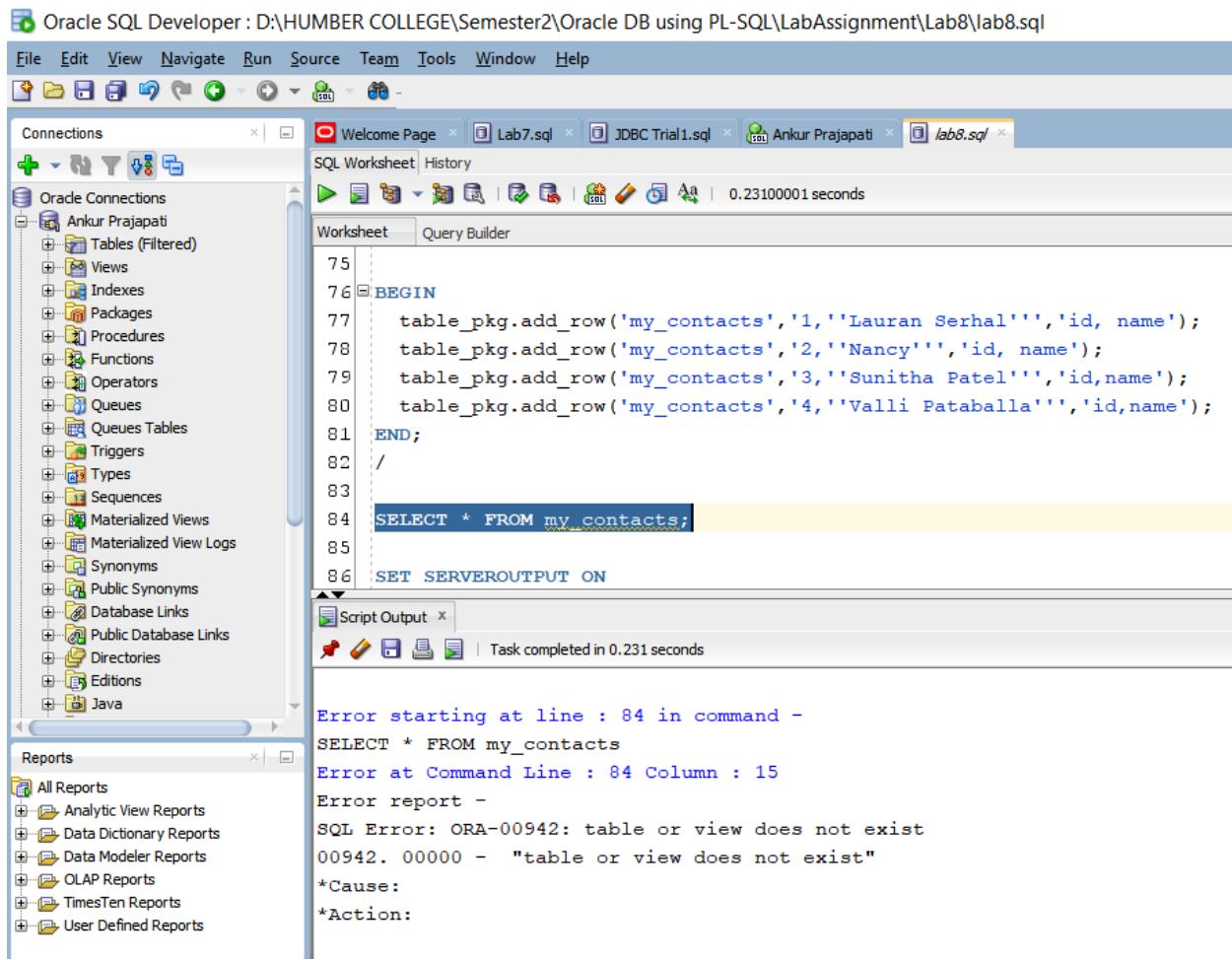
- We are using SELECT query to see the record inside table my_contacts, but table is not there so its not possible for us.



- We are trying to delete row from table my_contacts having id 3.
- For that we have used SET SERVEROUTPUT ON to print the output
- But due to table is not available there it's not possible to delete record.



- Here we are trying to update row from table my_contacts having name as Nancy Greenberg and having id 2.
- But due to table does not exist updating fails.



- We are using SELECT query to see the record inside table my_contacts, but table is not there so it's not possible for us.

The screenshot displays the Oracle SQL Developer interface. The left pane shows the 'Oracle Connections' tree with 'Ankur Prajapati' selected. The main window shows a SQL Worksheet with the following script:

```
83
84 SELECT * FROM my_contacts;
85
86 SET SERVEROUTPUT ON
87 EXECUTE table_pkg.del_row('my_contacts', 'id=3')
88
89 EXEC table_pkg.upd_row('my_contacts', 'name='Nan
90
91 EXECUTE table_pkg.remove('my_contacts')
92 DESCRIBE my_contacts
93
94
```

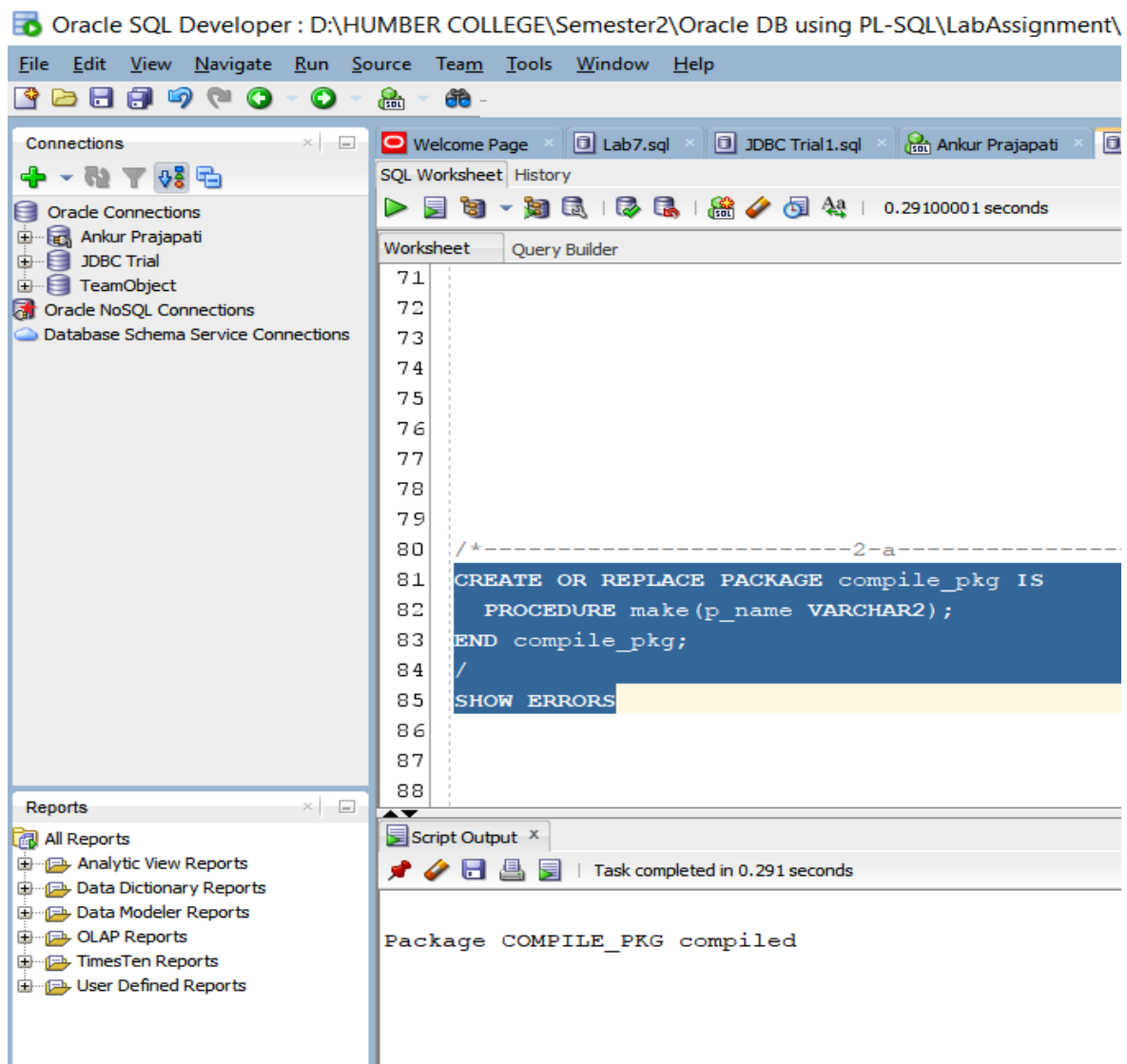
The 'Script Output' pane at the bottom shows the execution results and an error message:

```
DROP TABLE my_contacts

Error starting at line : 91 in command -
BEGIN table_pkg.remove('my_contacts'); END;
Error report -
ORA-00942: table or view does not exist
ORA-06512: at "SYS.DBMS_SQL", line 1134
ORA-06512: at "N01324892.TABLE_PKG", line 48
ORA-06512: at line 1
00942. 00000 - "table or view does not exist"
*Cause:
*Action:

ERROR:
ORA-04043: object my_contacts does not exist
```

- We are trying to remove my_contacts from database but it says table or view does not exist. That's why this database operation is not possible.

Question 2:

- Creation of compile_pkg using make procedure.
- Note that this procedure basically creates new table using given name.
- Compile_pkg is compiled successfully.

```

100  * have a PACKAGE BODY. In this case, we can
101  * only compile the complete package, but not
102  * the specification or body as separate
103  * components.
104  */
105  SELECT object_type INTO v_proc_type
106  FROM user_objects
107  WHERE object_name = UPPER(p_name)
108  AND ROWNUM = 1;
109  RETURN v_proc_type;
110  EXCEPTION
111  WHEN NO_DATA_FOUND THEN
112  RETURN NULL;
113  END;
114  PROCEDURE make(p_name VARCHAR2) IS
115  v_stmt VARCHAR2(100);
116  v_proc_type VARCHAR2(30) := get_type(p_name);
117  BEGIN
118  IF v_proc_type IS NOT NULL THEN
119  v_stmt := 'ALTER ' || v_proc_type || ' ' || p_name || ' COMPILE';
120  execute(v_stmt);
121  ELSE
122  RAISE_APPLICATION_ERROR(-20001,
123  'Subprogram ' || p_name || ' does not exist');
124  END IF;
125  END make;
126  END compile_pkg;
127  /
128  SHOW ERRORS
129

```

Script Output x

Task completed in 0.237 seconds

Package COMPILE_PKG compiled

Package Body COMPILE_PKG compiled

- Here we are taking screen shot of package specification and package body compilation.
- Both the compilation is done successfully.
- We have included get_type function to determine object type from the PL/SQL data dictionary. It will return package type if it exists otherwise it will return NULL.
- This function returns only one line so you can only compile whole package with specification and body. Note that you cannot compile stand alone package specification or body.
- We have implemented make procedure which accepts one argument called name which represents object name and it will call get_type function.

Oracle SQL Developer : D:\HUMBER COLLEGE\Semester2\Oracle DB using PL-SQL\LabAssignment\Lab8\lab8.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections

- Oracle Connections
 - Ankur Prajapati
 - JDBC Trial
 - TeamObject
- Oracle NoSQL Connections
- Database Schema Service Connections

SQL Worksheet History

1.12699997 seconds

Worksheet Query Builder

```

123 subprogram || p_name || ' does not exist',
124     END IF;
125     END make;
126 END compile_pkg;
127 /
128 SHOW ERRORS
129
130
131 SET SERVEROUTPUT ON
132
133 EXECUTE compile_pkg.make('employee_report')
134 EXECUTE compile_pkg.make('emp_pkg')
135 EXECUTE compile_pkg.make('emp_data')
136

```

Script Output

Task completed in 1.127 seconds

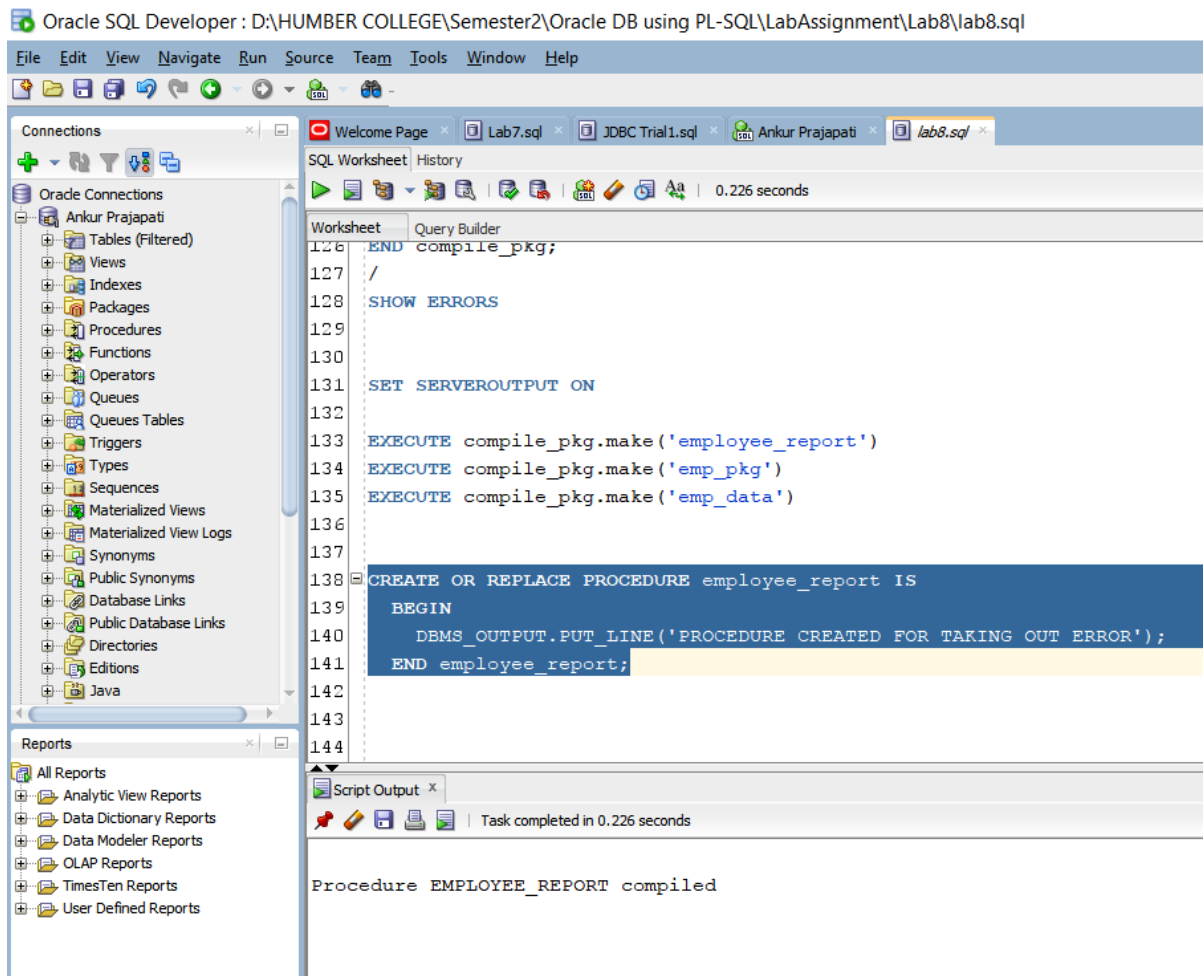
Error starting at line : 133 in command -
 BEGIN compile_pkg.make('employee_report'); END;
 Error report -
 ORA-20001: Subprogram 'employee_report' does not exist
 ORA-06512: at "N01324892.COMPILE_PKG", line 39
 ORA-06512: at line 1

ALTER PACKAGE emp_pkg COMPILE

PL/SQL procedure successfully completed.

Error starting at line : 135 in command -
 BEGIN compile_pkg.make('emp_data'); END;
 Error report -
 ORA-20001: Subprogram 'emp_data' does not exist
 ORA-06512: at "N01324892.COMPILE_PKG", line 39
 ORA-06512: at line 1

- We are calling make procedure of compile_pkg with employee_report, emp_pkg, emp_data
- As we don't have employee_report package we can not alter it using this procedure.
- emp_pkg is already there so we can actually alter package and it says it's compiled successfully.
- Same we don't have emp_data object that's why it says that emp_data does not exist.



Let's do one thing we will create employee_report procedure to remove this error and find out if it works or not.

Employee_report compiled

The screenshot displays the Oracle SQL Developer interface. The top menu bar includes File, Edit, View, Navigate, Run, Source, Team, Tools, Window, and Help. The main window is titled 'Oracle SQL Developer : D:\HUMBER COLLEGE\Semester2\Oracle DB using PL-SQL\LabAssignment\Lab8\lab8.sql'. The left pane shows the 'Connections' tree with 'Ankur Prajapati' selected. The right pane shows the 'SQL Worksheet' with the following code:

```
128 SHOW ERRORS
129
130
131 SET SERVEROUTPUT ON
132
133 CREATE OR REPLACE PROCEDURE employee_report IS
134 BEGIN
135     DBMS_OUTPUT.PUT_LINE('PROCEDURE CREATED FOR TAKING OUT ERROR');
136 END employee_report;
137
138 EXECUTE compile_pkg.make('employee_report')
139 EXECUTE compile_pkg.make('emp_pkg')
140 EXECUTE compile_pkg.make('emp_data')
141
```

The 'Script Output' pane at the bottom shows the following messages:

```
Procedure EMPLOYEE_REPORT compiled

ALTER PROCEDURE employee_report COMPILE

PL/SQL procedure successfully completed.

ALTER PACKAGE emp_pkg COMPILE

PL/SQL procedure successfully completed.

Error starting at line : 140 in command -
BEGIN compile_pkg.make('emp_data'); END;
Error report -
ORA-20001: Subprogram 'emp_data' does not exist
ORA-06512: at "N01324892.COMPILE_PKG", line 39
ORA-06512: at line 1
```

After creating procedure employee_report it actually alters employee_report procedure.

As we do not have emp_pkg it will give an error.