

EXERCISE-11 CREATING VIEWS

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1. Create a view called EMPLOYEE_VU based on the employee numbers, employee names and department numbers from the EMPLOYEES table. Change the heading for the employee name to EMPLOYEE.

The screenshot shows the APEX SQL Workshop interface. At the top, there are tabs for 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. Below the tabs, there is a 'SQL Commands' section. The 'Language' is set to 'SQL' and 'Rows' is set to '10'. There are buttons for 'Clear Command' and 'Find Tables'. Below this, there is a toolbar with icons for undo, redo, search, and a dropdown menu. The main area contains the following SQL code:

```
1 CREATE VIEW employee_vu AS
2 SELECT employee_id,
3        first_name || ' ' || last_name AS employee,
4        department_id
5 FROM employees;
```

Below the code editor, there is a 'Results' tab selected. The results area shows the message 'View created.' and the execution time '0.03 seconds'.

2. Display the contents of the EMPLOYEES_VU view.

APEX App Builder SQL Workshop Team Development Gallery

SQL Commands Schema WKSP_DBMS05

Language SQL Rows 20 Clear Command Find Tables

```
1 SELECT * FROM employee_vu;
```

Results Explain Describe Saved SQL History

EMPLOYEE_ID	EMPLOYEE	DEPARTMENT_ID
100	Steven King	10
101	Neena Kochhar	10
104	Bruce Ernst	60
109	Mark Davies	80
105	David Austin	80
106	Valli Pataballa	80
112	Bob White	90
114	Sara Brown	50
102	Lex De Haan	10
111	Alice Morgan	90
108	John Doe	90
103	Alexander Hunold	60
107	Diana Lorentz	80
113	Carol Zlotkey	80

3. Select the view name and text from the USER_VIEWS data dictionary views.

APEX App Builder SQL Workshop Team Development Gallery

SQL Commands Schema WKSP_DBMS05

Language SQL Rows 20 Clear Command Find Tables

```
1 SELECT view_name, text
2 FROM user_views
3 WHERE view_name = 'EMPLOYEE_VU';
```

Results Explain Describe Saved SQL History

VIEW_NAME	TEXT
EMPLOYEE_VU	SELECT employee_id, first_name ' ' last_name AS employee, department_id FROM employees

1 rows returned in 0.06 seconds Download

4. Using your EMPLOYEES_VU view, enter a query to display all employee names and department.

The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar is on the right. Below the navigation bar, the 'SQL Commands' section is active, showing a query in the editor:

```
1 SELECT EMPLOYEE, department_id
2 FROM EMPLOYEES_VU;
```

The 'Results' tab is selected, displaying a table with two columns: 'EMPLOYEE' and 'DEPARTMENT_ID'. The table contains the following data:

EMPLOYEE	DEPARTMENT_ID
Steven King	10
Neena Kochhar	10
Bruce Ernst	60
Mark Davies	80
David Austin	80
Valli Pataballa	80
Bob White	90
Tom Davis	90

5. Create a view named DEPT50 that contains the employee number, employee last names and department numbers for all employees in department 50. Label the view columns EMPNO, EMPLOYEE and DEPTNO. Do not allow an employee to be reassigned to another department through the view.

The screenshot shows the APEX SQL Workshop interface. The top navigation bar is the same as in the previous screenshot. The 'SQL Commands' section is active, showing a query in the editor:

```
1 CREATE VIEW DEPT50 AS
2 SELECT employee_id AS EMPNO, last_name AS EMPLOYEE, department_id AS DEPTNO
3 FROM employees
4 WHERE department_id = 50
5 WITH CHECK OPTION CONSTRAINT dept50_ck;
```

The 'Results' tab is selected, displaying the message 'View created.' and the execution time '0.04 seconds'.

6. Display the structure and contents of the DEPT50 view.

To display the structure of the view:

APEX

App Builder

SQL Workshop

Team Development

Gallery

↑ SQL Commands

Language

SQL

 Rows

20

Clear Command

Find Tables

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1

DESC DEPT50;

Results

Explain

Describe

Saved SQL

History

Object Type

VIEW

Object

DEPT50

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPT50	EMPNO	NUMBER	22	-	-	-	-	-	-
	EMPLOYEE	VARCHAR2	50	-	-	-	-	-	-
	DEPTNO	NUMBER	22	-	-	-	✓	-	-

To display the contents of the view:

APEX

App Builder

SQL Workshop

Team Development

Gallery

↑ SQL Commands

Language

SQL

 Rows

20

Clear Command

Find Tables

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1

SELECT * FROM DEPT50;

Results

Explain

Describe

Saved SQL

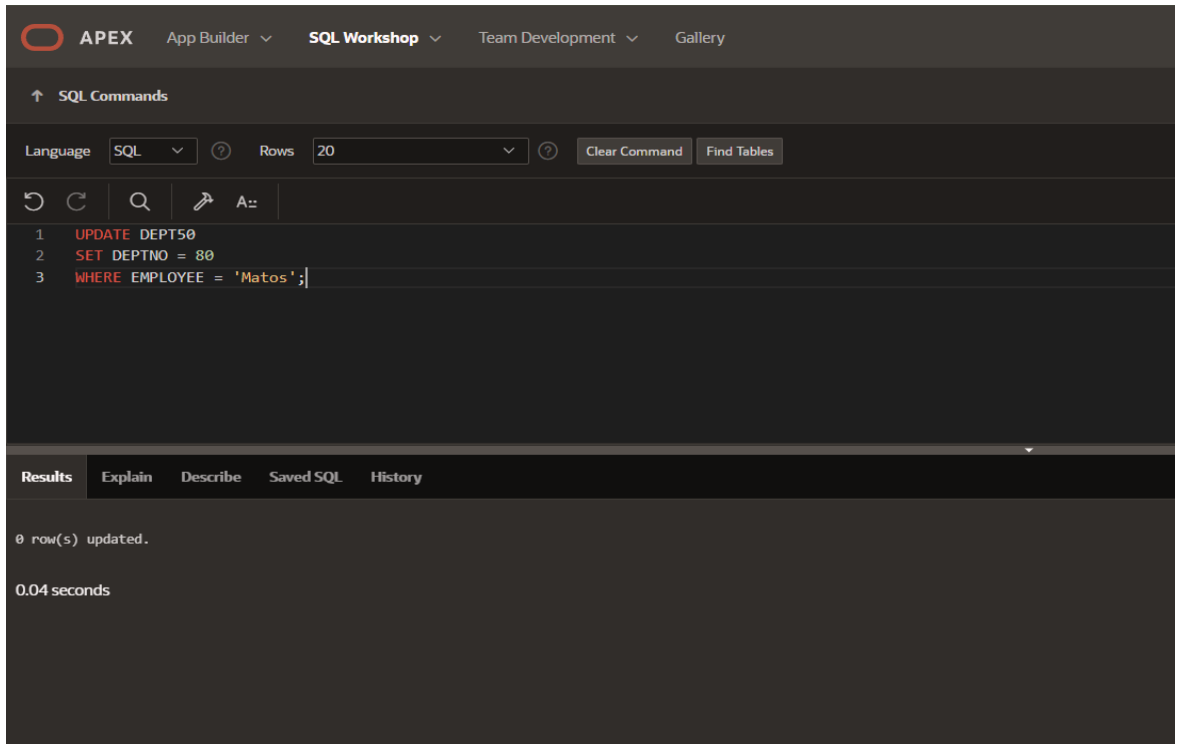
History

EMPNO	EMPLOYEE	DEPTNO
114	Brown	50

1 rows returned in 0.01 seconds

Download

7. Attempt to reassign Matos to department 80.

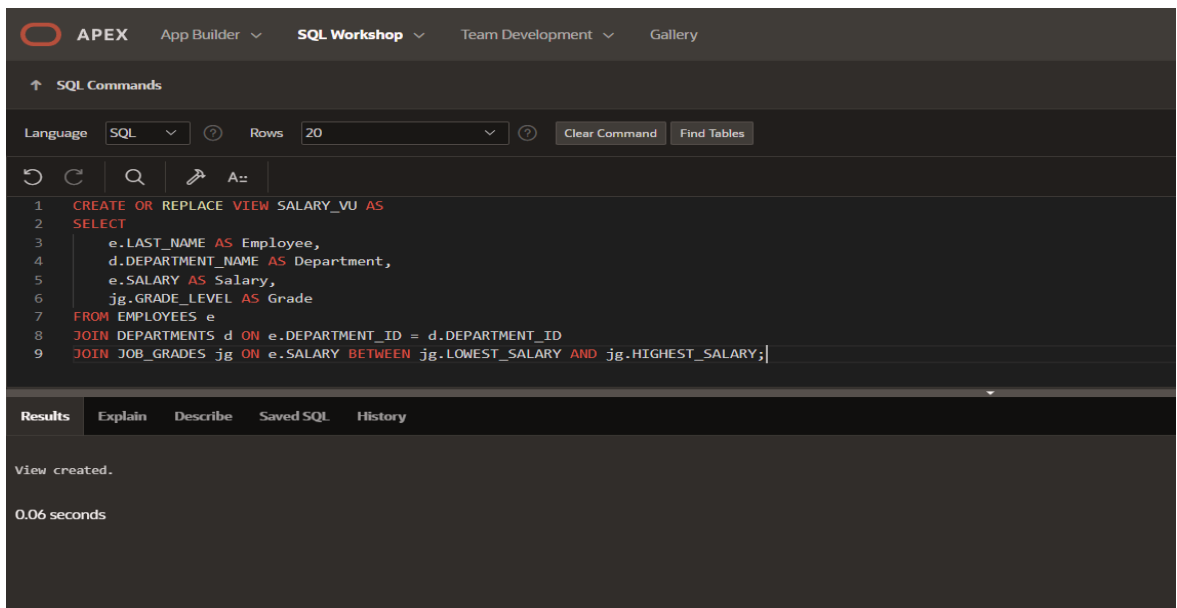


The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. Below the navigation bar, the 'SQL Commands' section is active. The 'Language' is set to 'SQL', and the 'Rows' limit is set to '20'. The 'Clear Command' and 'Find Tables' buttons are visible. The SQL command editor contains the following code:

```
1 UPDATE DEPT50
2 SET DEPTNO = 80
3 WHERE EMPLOYEE = 'Matos';
```

The 'Results' tab is selected, showing the execution outcome: '0 row(s) updated.' and '0.04 seconds'.

8. Create a view called SALARY_VU based on the employee last names, department names, salaries, and salary grades for all employees. Use the EMPLOYEES, DEPARTMENTS and JOB_GRADE tables. Label the column Employee, Department, salary, and Grade respectively.



The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. Below the navigation bar, the 'SQL Commands' section is active. The 'Language' is set to 'SQL', and the 'Rows' limit is set to '20'. The 'Clear Command' and 'Find Tables' buttons are visible. The SQL command editor contains the following code:

```
1 CREATE OR REPLACE VIEW SALARY_VU AS
2 SELECT
3     e.LAST_NAME AS Employee,
4     d.DEPARTMENT_NAME AS Department,
5     e.SALARY AS Salary,
6     jg.GRADE_LEVEL AS Grade
7 FROM EMPLOYEES e
8 JOIN DEPARTMENTS d ON e.DEPARTMENT_ID = d.DEPARTMENT_ID
9 JOIN JOB_GRADES jg ON e.SALARY BETWEEN jg.LOWEST_SALARY AND jg.HIGHEST_SALARY;
```

The 'Results' tab is selected, showing the execution outcome: 'View created.' and '0.06 seconds'.