

## EXERCISE-10

### USING THE SET OPERATORS

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1. The HR department needs a list of department IDs for departments that do not contain the job ID ST\_CLERK. Use set operators to create this report.

The screenshot shows the APEX SQL Workshop interface. The SQL Commands tab is active, displaying the following query:

```
1 SELECT department_id
2 FROM departments
3 MINUS
4 SELECT department_id
5 FROM employees
6 WHERE job_id = 'ST_CLERK';
```

The Results tab is selected, showing a table with the column DEPARTMENT\_ID. The table contains 8 rows of data: 10, 20, 30, 40, 60, 70, 80, and 90. The status bar at the bottom indicates "8 rows returned in 0.01 seconds" and provides a Download link.

2. The HR department needs a list of countries that have no departments located in them. Display the country ID and the name of the countries. Use set operators to create this report.

The screenshot shows the APEX SQL Workshop interface. The SQL Commands tab is active, displaying the following query:

```
1 SELECT country_id, country_name
2 FROM countries
3 MINUS
4 SELECT c.country_id, c.country_name
5 FROM countries c
6 JOIN locations l ON c.country_id = l.country_id
7 JOIN departments d ON l.location_id = d.location_id;
```

The Results tab is selected, showing the text "no data found".

- Produce a list of jobs for departments 10, 50, and 20, in that order. Display job ID and department ID using set operators.

The screenshot shows the APEX SQL Workshop interface. The SQL command area contains the following query:

```
1 SELECT job_id, department_id
2 FROM employees
3 WHERE department_id = 10
4 UNION ALL
5 SELECT job_id, department_id
6 FROM employees
7 WHERE department_id = 50
8 UNION ALL
9 SELECT job_id, department_id
10 FROM employees
11 WHERE department_id = 20
12 ORDER BY department_id;
```

The Results tab is selected, displaying a table with two columns: **JOB\_ID** and **DEPARTMENT\_ID**. The table contains four rows of data:

JOB_ID	DEPARTMENT_ID
AD_PRES	10
AD_VP	10
AD_VP	10
ST_CLERK	50

4 rows returned in 0.01 seconds. Download

- Create a report that lists the employee IDs and job IDs of those employees who currently have a job title that is the same as their job title when they were initially hired by the company (that is, they changed jobs but have now gone back to doing their original job).

The screenshot shows the APEX SQL Workshop interface. The SQL command area contains the following query:

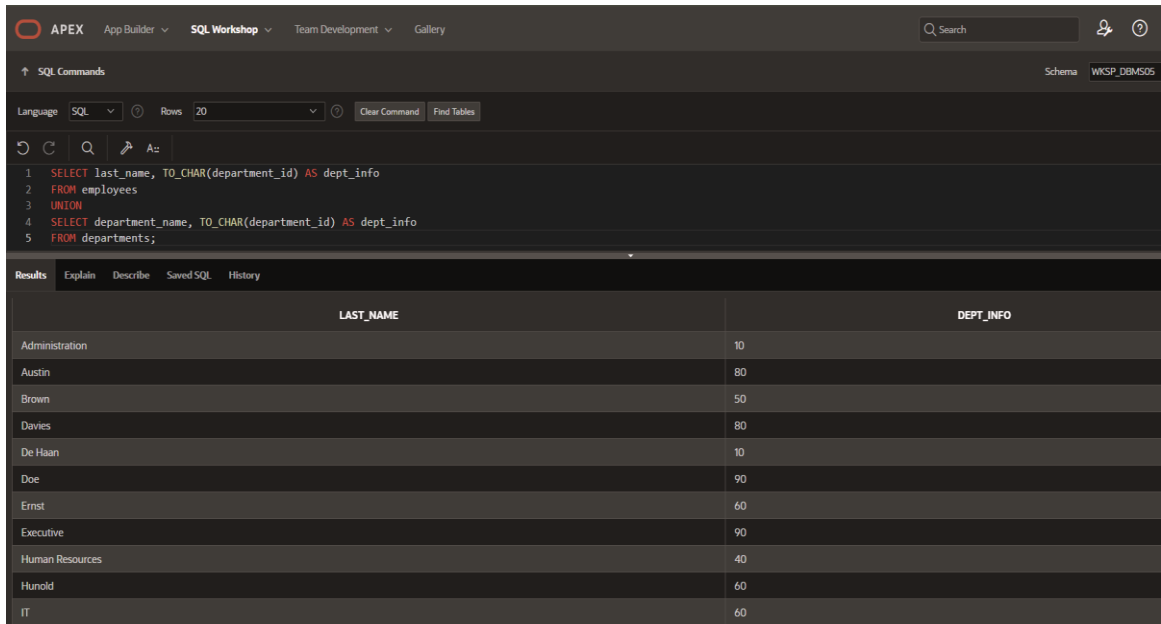
```
1 SELECT employee_id, job_id
2 FROM employees
3 INTERSECT
4 SELECT employee_id, job_id
5 FROM job_history;
```

The Results tab is selected, displaying a table with two columns: **EMPLOYEE\_ID** and **JOB\_ID**. The table contains two rows of data:

EMPLOYEE_ID	JOB_ID
104	IT_PROG
105	SA_REP

2 rows returned in 0.01 seconds. Download

5. The HR department needs a report with the following specifications:
- Last name and department ID of all the employees from the EMPLOYEES table, regardless of whether or not they belong to a department.
  - Department ID and department name of all the departments from the DEPARTMENTS table, regardless of whether or not they have employees working in them
- Write a compound query to accomplish this.



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 shows a query with line numbers 1 through 5. The query is a UNION of two SELECT statements. The first SELECT statement selects 'last\_name' and 'TO\_CHAR(department\_id) AS dept\_info' from the 'employees' table. The second SELECT statement selects 'department\_name, TO\_CHAR(department\_id) AS dept\_info' from the 'departments' table. Below the query, the 'Results' section is active, showing a table with two columns: 'LAST\_NAME' and 'DEPT\_INFO'. The table contains 12 rows of data, including department names and their corresponding IDs.

LAST_NAME	DEPT_INFO
Administration	10
Austin	80
Brown	50
Davies	80
De Haan	10
Doe	90
Ernst	60
Executive	90
Human Resources	40
Hunold	60
IT	60