**TOPIC 08: SET OPERATOR**

**Exercises**

**\*\*\* This exercise is performed on HR Schema (HR database) \*\*\***

**\*\* This exercise may include some of the topics examined previously\*\***

1. Execute UNION operator and UNION ON operator on the following query: SELECT region\_name FROM regions; What is the difference?

union - returns the combined rows from two queries, sorting them and removing duplicates.

union all - returns the combined rows from two queries without sorting or removing duplicates.

1. Execute MINUS operator on the following query: SELECT region\_name FROM regions;

No rows will be returned, because MINUS returns only the rows in the first result set that do not appear in the second result set, sorting them and removing duplicates.

1. Run the following query: “SELECT department\_id, count(1) FROM employees WHERE department\_id IN (20,30,40) GROUP BY department\_id;”.

This query will choose table employees, to do the selection of department\_id in argumented array, group results by department\_id, for columns that passed procession it will show depatment\_ID, and it will do count rows by same value in column 1, as it is scalar func it will show one row.

Now run the following query: “SELECT 20,count(1) FROM employees WHERE department\_id=20 UNION ALL SELECT 30,count(1) FROM employees WHERE department\_id=30 UNION ALL SELECT 40,count(1) FROM employees WHERE department\_id=40;

it will to all mentioned above but it will create columns for 20,30,40 and as they exist separately it will show 0 count. The difference is that department\_id was commnon variable in first case.

1. Find out if any managers manage staff in both departments 20 and 30, and exclude any managers with staff in department 40.

select manager\_id from employees

where department\_id=20

intersect select manager\_id

from employees

where department\_id=30 minus select manager\_id

from employees

where department\_id=40;

1. Use a compound query to report salaries subtotaled by department, by manager, and the overall total.

select department\_id, to\_number(null), sum(salary)

from employees

group by department\_id union select to\_number(null), manager\_id, sum(salary)

from employees group by manager\_id union all select to\_number(null), to\_number(null), sum(salary)

from employees;

1. Execute the following query and discuss:

SELECT location\_id, department\_name "Department", TO\_CHAR(NULL) "Country Office" FROM departments UNION SELECT location\_id, TO\_CHAR(NULL) "Department", state\_province FROM locations;

In order to fulfill the conditions for using the set of operators, we can use this to\_char function if the column in a table does not exist.

1. Execute the following query and discuss:

SELECT region\_id FROM regions INTERSECT SELECT region\_id FROM countries ORDER BY region\_id;

In this query, the intersect returns only common rows returned by the two select statements, which means that if a record exists in one query and not in the other, it will be omitted from the interselect results.