**EXERCISE - 3**

Create a table named Employees **if it does not exists** with the following columns:

**Employees Table**

* ***employee\_id*** as the primary key
* ***first\_name*** of type VARCHAR2 with a maximum length of 50
* ***last\_name*** of type VARCHAR2 with a maximum length of 50
* ***hire\_date*** of type DATE
* ***salary*** of type NUMBER with precision 10 and scale 2

**1: Insert with All Values** Insert a new employee with a first name "John", last name "Doe", a hire date of July 1, 2022, and a salary of $60000.00 into the Employees table.

**2: Insert with Null Hire Date** Insert an employee with a first name "Jane", last name "Smith", a null hire date, and a salary of $55000.00 into the Employees table.

**3: Insert with Null Salary** Insert an employee with a first name "Michael", last name "Johnson", a hire date of March 15, 2023, and a null salary into the Employees table.

**4: Insert with Both Null Hire Date and Salary** Insert an employee with a first name "Emily", last name "Williams", a null hire date, and a null salary into the Employees table.

**5: Insert with Different Values** Insert an employee with a first name "Daniel", last name "Brown", a hire date of September 5, 2022, and a salary of $48000.00 into the Employees table.

**6: Insert with Different Values** Insert an employee with a first name "Laura", last name "Davis", a hire date of April 20, 2023, and a salary of $52000.00 into the Employees table.

**7: Insert with Different Values** Insert an employee with a first name "Matthew", last name "Wilson", a hire date of December 10, 2021, and a salary of $54000.00 into the Employees table.

**8: Insert with Null Hire Date** Insert an employee with a first name "Emma", last name "Brown", a null hire date, and a salary of $null into the Employees table.

**9: Insert with Different Values** Insert an employee with a first name "Olivia", last name "Jones", a hire date of May 30, 2023, and a salary of $59000.00 into the Employees table.

**10: Insert with Different Values** Insert an employee with a first name "Noah", last name "Smith", a hire date of August 8, 2022, and a salary of $null into the Employees table.

**11: Insert with Different Values** Insert an employee with a first name "William", last name "Johnson", a hire date of June 25, 2021, and a salary of $45000.00 into the Employees table.

**12: Insert with Null Salary** Insert an employee with a first name "Ava", last name "Williams", a hire date of null, and a null salary into the Employees table.

**13: Insert with Different Values** Insert an employee with a first name "Sophia", last name "Davis", a hire date of February 18, 2023, and a salary of $57000.00 into the Employees table.

**14: Insert with Null Hire Date and Salary** Insert an employee with a first name "James", last name "Wilson", a null hire date, and a null salary into the Employees table.

**15: Insert with Different Values** Insert an employee with a first name "Oliver", last name "Miller", a hire date of October 12, 2022, and a salary of $51000.00 into the Employees table.

**16: Insert with Null Hire Date and Salary** Insert an employee with a first name "Amelia", last name "Brown", a null hire date, and a null salary into the Employees table.

**17: Insert with Different Values** Insert an employee with a first name "Benjamin", last name "Davis", a hire date of December 2, 2021, and a salary of $53000.00 into the Employees table.

**18: Insert with Null Salary** Insert an employee with a first name "Elijah", last name "Wilson", a hire date of March 9, 2023, and a null salary into the Employees table.

**19: Insert with Different Values** Insert an employee with a first name "Lucas", last name "Brown", a hire date of June 22, 2022, and a salary of $56000.00 into the Employees table.

**20: Insert with Null Hire Date and Salary** Insert an employee with a first name "Mia", last name "Johnson", a null hire date, and a null salary into the Employees table.

**Basic SELECT Queries:**

1. Display the details of all employees.

2. Show the first and last names of employees.

3. List the employee IDs and hire dates.

4. Retrieve the first name, last name, and salary of employees.

5. Display all columns for employees hired after January 1, 2022.

6. Display the employee IDs and last names of employees.

7. List the hire dates and salaries of all employees.

8. Display all columns for employees with a salary greater than $50000.00.

9. Show the first name, last name, and hire date of employees hired before July 1, 2023.

**Using WHERE Clause:**

1. List employees hired in the year 2023.

2. Show employees with salaries greater than $55000.00.

3. Display employees with null hire dates.

4. List employees with first names starting with 'J'.

5. Retrieve employees with a salary between $50000.00 and $60000.00.

6. List employees with last names containing 'son'.

7. Show employees with salaries less than $60000.00 and hired in 2022.

8. Display employees with hire dates after January 1, 2021, and salaries less than $55000.00.

9. List employees with first names starting with 'M' or last names ending with 'son'.

10. Show employees with salaries greater than $50000.00 and not hired in 2023.

**Using NVL() Function:**

1. Show the employee IDs and salaries. Replace null salaries with 0.

2. Display the first name and last name of employees. Replace null first names with 'Unknown'.

3. Show the employee IDs and salaries. Replace null salaries with the average salary.

**Using Concatenate Operator:**

1. List the full names (first name and last name) of employees.

2. Show employee IDs and concatenated first and last names.

3. Display a message: "Employee [employee\_id] [first\_name] [last\_name] has a salary of [salary]."

4. List the full names (last name, comma, first name) of employees.

5. Show employee IDs and concatenated last name, space, and first name.

6. Display a message: "Employee [last\_name], [first\_name] has a salary of [salary]."

**Using ANY(), SOME(), and ALL():**

1. List employees with salaries greater than ANY other employee's salary.

2. Show employees with salaries greater than the minimum salary in the company.

3. Display employees with salaries less than ALL other employees' salaries.

4. List employees with salaries greater than ANY other employee's salary.

5. Show employees with salaries greater than SOME of the salaries.

6. Display employees with salaries less than ALL employees' salaries.

**Combining Functions and Operators:**

1. Display the employee IDs and names for employees hired in 2022.

2. List the first name and salary of employees with salaries greater than $55000.00 and hired in 2021.

3. Display the employee IDs and last names for employees hired before January 1, 2022, or with a salary greater than $55000.00.

4. List the first name and salary of employees hired in 2022 with salaries greater than $50000.00.

**Using Logical Operators:**

1. Display employees hired in 2022 with salaries less than $55000.00.

2. List employees with non-null hire dates and salaries.

3. Show employees with salaries less than $50000.00 or hired in 2023.

4. Display employees with last names containing 'Brown' or hired in 2023 with salaries less than $60000.00.

5. List employees with non-null hire dates and salaries.

6. Show employees with salaries less than $50000.00 and hire dates either before January 1, 2022, or null.