

# Assignment (4)

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## ❖ Assignment Tasks (Step-by-Step):

### 1. Create the Table and Insert Data

1. Create a table named employees with the following columns:
  - employee\_id (NUMBER)
  - full\_name (VARCHAR2)
  - department (VARCHAR2)
  - salary (NUMBER)
  - commission (NUMBER)
  - hire\_date (DATE)
  - status (VARCHAR2) - values like 'Active', 'Resigned', 'On Leave'
2. Include proper data types and apply appropriate constraints such as:
  - NOT NULL
  - DEFAULT
  - CHECK
  - PRIMARY KEY
3. Insert at least 6 rows with realistic and varied values, including nulls, zeros, different departments, and different statuses.

### 2. Write and Execute the Following SQL Queries

For each query, include:

- The SQL statement
- A brief comment explaining it (-- Comment)
- A screenshot of the query and its output

1. Select all columns and rows from the table using SELECT \*.
2. Perform the following DML operations:
  - Update at least one employee's salary
  - Delete one employee with status = 'Resigned'
  - Use ROLLBACK to undo a change
  - Use COMMIT to save another change
3. Create a simple view showing only full\_name and salary.
4. Create a complex view that displays full\_name, department, and total\_income (salary + commission).
5. Create a sequence to automatically generate employee\_id values.
6. Create an index on the department or hire\_date column to enhance performance.
7. Create one public synonym and one private synonym for the employees table.

## ❖ Submission Guidelines:

- Save your work as a PDF file
- Organize the PDF in the same order as the tasks above.
- Each query must include:
  - The SQL code
  - A short explanation
  - A screenshot of the result
- Upload the folder to the assignment submission link on **Moodle**.
- **Make sure your file is uploaded correctly** before the deadline.
- After uploading, **double-check** that your file appears in the submission and opens properly.

## ❖ Tips:

- Make sure all queries run without errors.
- Use meaningful sample data for better output results.
- Keep your PDF neat and well-organized.