#### **EXERCISE-4**

#### **Writing Basic SQL SELECT Statements**

### Employee table:

```
CREATE TABLE Employees (
    Employee_id NUMBER(6) NOT NULL,
    First_Name VARCHAR(20),
    Last_Name VARCHAR(25) NOT NULL,
    Email VARCHAR(25) NOT NULL,
    Phone_Number VARCHAR(20),
    Hire_date DATE NOT NULL,
    Job_id VARCHAR(10) NOT NULL,
    Salary NUMBER(8,2),
    Commission_pct NUMBER(2,2),
    Manager_id NUMBER(6),
    Department_id NUMBER(4),
    PRIMARY KEY (Employee_id)
);
```

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMPLOYEES	EMPLOYEE_ID	NUMBER		6	0	1			-
	FIRST_NAME	VARCHAR2	20				<b></b> ✓		-
	LAST_NAME	VARCHAR2	25						-
	EMAIL	VARCHAR2	25						-
	PHONE_NUMBER	VARCHAR2	20				<b></b> ✓		-
	HIRE_DATE	DATE	7						-
	JOB_ID	VARCHAR2	10						-
	SALARY	NUMBER		8	2		<b></b> ✓		-
	COMMISSION_PCT	NUMBER		2	2		s/		-
	MANAGER_ID	NUMBER		6	0		<b></b>		-
	DEPARTMENT_ID	NUMBER		4	0		<b>V</b>		-

#### **Department Table**

CREATE TABLE Departments ( Dept\_id NUMBER(6) NOT NULL, Dept\_name VARCHAR(20) NOT NULL, Manager\_id NUMBER(6), Location\_id NUMBER(4), PRIMARY KEY (Dept\_id), FOREIGN KEY (Manager\_id) REFERENCES Employees(Employee\_id));

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPARTMENTS	DEPT_ID	NUMBER		6	0	1			
	DEPT_NAME	VARCHAR2	20						
	MANAGER_ID	NUMBER		6	0		<b></b>		
	LOCATION_ID	NUMBER	-	4	0	-	<b></b>	-	-

## Find the Solution for the following:

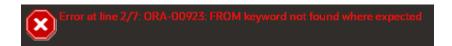
1. The following statement executes successfully.

## **Identify the Errors**

SELECT employee\_id, last\_name sal\*12 ANNUAL SALARY FROM employees;

## Queries

SELECT employee\_id, last\_name sal\*12 as "ANNUAL SALARY" FROM employees;



2. Show the structure of departments the table. Select all the data from it.

# Describe Departments;

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPARTMENTS	DEPT_ID	NUMBER		6	0	1			-
	DEPT_NAME	VARCHAR2	20						-
	MANAGER_ID	NUMBER		6	0		S		-
	LOCATION_ID	NUMBER	-	4	0	-	S	-	-

# Select \* from departments;

DEPT_ID	DEPT_NAME	MANAGER_ID	LOCATION_ID
40	HR	1003	104
10	п	1001	101
30	Sales	1005	103
20	Administration	1004	102

3. Create a query to display the last name, job code, hire date, and employee number for each employee, with employee number appearing first.

```
SELECT employee_id AS "Employee Number",
last_name AS "Last Name",
job_id AS "Job Code",
hire_date AS "Hire Date"
FROM employees;
```

Employee Number	Last Name	Job Code	Hire Date
1001	Doe	IT_PROG	01/15/2024
1003	Johnson	HR_REP	03/10/2024
1004	Williams	ADMIN	04/05/2024
1002	Smith	SA_REP	02/20/2024
1005	Brown	SA_MAN	05/12/2024

4. Provide an alias STARTDATE for the hire date.

EMPLOYEE_ID	LAST_NAME	JOB_ID	STARTDATE
1001	Doe	IT_PROG	01/15/2024
1003	Johnson	HR_REP	03/10/2024
1004	Williams	ADMIN	04/05/2024
1002	Smith	SA_REP	02/20/2024
1005	Brown	SA_MAN	05/12/2024

5. Create a query to display unique job codes from the employee table.

# SELECT DISTINCT job\_id FROM employees;

	JOB_ID	
HR_REP		
ADMIN		
IT_PROG		
SA_MAN		
SA_REP		

6. Display the last name concatenated with the job ID , separated by a comma and space, and name the column EMPLOYEE and TITLE.

SELECT last\_name || ', ' || job\_id AS "EMPLOYEE, TITLE" FROM employees;

	EMPLOYEE, TITLE
Doe, IT_PROG	
Johnson, HR_REP	
Williams, ADMIN	
Smith, SA_REP	
Brown, SA_MAN	

7. Create a query to display all the data from the employees table. Separate each column by a comma. Name the column THE\_OUTPUT.

SELECT employee\_id  $\|$  ', '  $\|$  first\_name  $\|$  ', '  $\|$  last\_name  $\|$  ', '  $\|$  email  $\|$  ', '  $\|$  phone\_number  $\|$  ', '  $\|$  hire\_date  $\|$  ', '  $\|$  job\_id AS "THE\_OUTPUT" FROM employees;

THE_OUTPUT
1001, John, Doe, john.doe@example.com, 123-456-7890, 01/15/2024, IT_PROG
1003, Michael, Johnson, m.johnson@example.com, 111-222-3333, 03/10/2024, HR_REP
1004, Emily, Williams, e.williams@example.com, 444-555-6666, 04/05/2024, ADMIN
1002, Jane, Smith, jane.smith@example.com, 987-654-3210, 02/20/2024, SA_REP
1005, David, Brown, d.brown@example.com, 777-888-9999, 05/12/2024, SA_MAN