EXERCISE-4

Writing Basic SQL SELECT Statements

OBJECTIVES

After the completion of this exercise, the students will be able to do the following:
- List the capabilities of SQL SELECT Statement
- Execute a basic SELECT statement

Capabilities of SQL SELECT statement

A SELECT statement retrieves information from the database. Using a select statement, we can perform

✓ Projection: To choose the columns in a table
✓ Selection: To choose the rows in a table
✓ Joining: To bring together the data that is stored in different tables

Basic SELECT Statement

Syntax
SELECT *|DISTINCT Column_ name| alias
`   FROM table_name;

NOTE:
DISTINCT—Suppr
ess the duplicates.
Alias—gives selected columns different headings.

Example: 1
SELECT * FROM departments;

Example: 2
SELECT location_id, department_id FROM departments;

Writing SQL Statements

- SQL statements are not case sensitive
- SQL statements can be on one or more lines.
- Keywords cannot be abbreviated or split across lines
- Clauses are usually placed on separate lines
- Indents are sued to enhance readability

Using Arithmetic Expressions

Basic Arithmetic operators like *, /, +, -can be used

Example:1

SELECT last_name, salary, salary+300 FROM employees;

Example:2
SELECT last_name, salary, 12*salary+100 FROM employees;

The statement is not same as
SELECT last_name, salary, 12*(salary+100) FROM employees;

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

```
desc department;
```

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, last_name, job-id, hire-date
                                   from employee;
```

4. Provide an alias STARTDATE for the hire date.

```
select hire-date as startdate from employee;
```

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

```
select distinct job-id from employees;
```

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

```
select concat-ws(',', l-name, job-code) as 'Employee and
title' from employee;
```

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 concat-ws(',', employee-number, f-name, l-name,
job-code, hire-date) as the-output from employee;
```

Evaluation Procedure	Marks awarded
Query(5)	5
Execution (5)	5
Viva(5)	5
Total (15)	15
Faculty Signature	RPN 8/9/25

COMPARISON OPERATORS

1. Who are the partners of DJs on Demand who do not get an authorized expense amount?

   Select partner name from d-partners where authorised
   expense is NULL;

2. Select all the Oracle database employees whose last names end with "s". Change the heading of the column to read Possible Candidates.

   Select last name as 'Possible Candidate' from
   employee where last_name like '%s';

3. Which statement(s) are valid?
   a. WHERE quantity <> NULL;
   b. WHERE quantity = NULL;
   c. WHERE quantity IS NULL;
   d. WHERE quantity != NULL;

4. Write a SQL statement that lists the songs in the DJs on Demand inventory that are type code 77, 12, or 1.

   Select song-title from d:songs where type-code in
   (77, 12, 1);

Logical Comparisons and Precedence Rules

1. Execute the two queries below. Why do these nearly identical statements produce two different results? Name the difference and explain why.

SELECT code, description
FROM d_themes
WHERE code >200 AND description IN('Tropical', 'Football', 'Carnival'); SELECT
code, description
FROM d_themes
WHERE code >200 OR description IN('Tropical', 'Football', 'Carnival');

1) Returns only rows where both condition are true (code >200 and matching description);

2) Returns rows where either condition is true (code >200 or description matches);

2. Display the last names of all Global Fast Foods employees who have "e" and "i" in their last names.

Select last-name from f-stuffs where last-name like '%e%' and last-name like '%i%';

3. "I need to know who the Global Fast Foods employees are that make more than $6.50/hour and their position is not order taker."

Select first-name from employees where last-name like '%d%' and last-name like '%a%' and last-name like '%e%';

4. Using the employees table, write a query to display all employees whose last names start with "D" and have "a" and "e" anywhere in their last name.

Select first-name, last-name, staff-type, salary from f-staffs where salary >6.50 and lower (staff-type) <> 'order take';

5. In which venues did DJs on Demand have events that were not in private homes?

Select distinct venue-name FROM d-events where lower (venue-type) <> 'private home';

6. Which list of operators is in the correct order from highest precedence to lowest precedence?
a. AND, NOT, OR
b. NOT, OR, AND
c. NOT, AND, OR

For questions 7 and 8, write SQL statements that will produce the desired output.

7. Who am I?
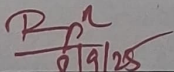
I was hired by Oracle after May 1998 but before June of 1999. My salary is less than $8000 per month, and I have an "en" in my last name.

Select first-name, last-name, hire-date, salary from employees where hire-date > TO date (31-MAY-1998, 'DD-MM-YYYY') and hire date < TO date (01-JUN-1999) 'DD-MON-YYYY') , and salary < 8000 and last-name like '%en%';

8. What's my email address?

Because I have been working for Oracle since the beginning of 1996, I make more than $9000 per month. Because I make so much money, I don't get a commission

Select first-name, last-name, email, hire-date, salary from employees where hire date >= TO-DATE < '01-JAN-1996', 'DD-MM-YYYY') and salary > 9000 and commission pct is NULL;

Evaluation Procedure	Marks awarded
Practice Evaluation (5)	5
Viva(5)	5
Total (10)	10
Faculty Signature	8/9/25