Practice Evaluation (5)	5
Viva(5)	5
Total (10)	10
Faculty Signature	

Date: 13/8/25

EXERCISE-4

Writing Basic SQL SELECT Statements

OBJECTIVES AIM: To write basic SQL Select Statements

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 last_name||'is a'||job_id AS "EMPLOYEES JOB" FROM employees;

Eliminating Duplicate Rows

- Using DISTINCT keyword.

Example:

SELECT DISTINCT deparment_id FROM employees;

Displaying Table Structure

- Using DESC keyword.

Syntax

DESC table_name;

Example:

DESC employees;

Find the Solution for the following:

True OR False

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.

DESC departments;

SELECT * FROM departments;

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_code, hire_date
FROM employees;

4. Provide an alias STARTDATE for the hire date.

SELECT hire_date AS STARTDATE
FROM employees;

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

SELECT DISTINCT job_code 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 last_name || ',' || job_id AS
"EMPLOYEE AND TITLE" FROM EMPLOYEES.
```

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
|| ',' || job_id || ',' || salary || ',' || hire_date AS THE_OUTPUT
FROM EMPLOYEES
```

Evaluation Procedure	Marks awarded
Query(5)	5
Execution (5)	5
Viva(5)	4
Total (15)	14
Faculty Signature	

RESULT:

Thus the Select statements are executed.

Practice Questions

COMPARISON OPERATORS

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

```
Select partner_name FROM partners where
authorized_expense_amount is NULL AND company
= 'DJs on Demand';
```

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

```
Select l_name AS "Possible Candidates" FROM
employees where l_name like '%s';
```

1) Correct output:

employee_id	last_name	ANNUAL_salary
97	Kumar	80000
98	Vijay	90000
99	Rohith	100000
100	Prashanth	80000

2) output:

Field	Type	Null	Key	Default	Extra
dept_id	int(11)	NO	PRI	NULL	-
dept_name	varchar(30)	NO		NULL	-
manager_id	int(11)	YES		NULL	-
location_id	int(11)	YES		NULL	-

dept_id	dept_name	manager_id	location_id
10	Administration	201	1600
20	Marketing	202	1700
30	Purchasing	203	1800
50	Human resources	204	1900
70	IT	205	2000

3) OUTPUT:

emp_id	last_name	job_id	hire_date
97	Kumar	IT_PROG	2020-01-15
98	Vijay	HR_REP	2019-02-18
99	Rohith	IT_PROG	2021-03-20
100	Prashanth	AD_ASST	2018-04-22

4) OUTPUT:

START DATE
2020-01-15
2019-02-18
2021-03-20
2018-04-22

5) output:

job_id
IT_PROG
HR_REP
AD_ASST

6) output:

Employee AND Title
Kumar, IT_PROG
Vijay, HR_REP
Rohith, IT_PROG
Prashanth, AD_ASST

7) Output:

97, Priyan, kumar, Pkumar @ xyz.com, 123456-7890, 2020-01-15, IT-PROG, 6000, 0.10, 97, 60

98, Prajeet, vijay, Pvijay @ xyz.com, ~~2020~~ 987-654-3210, 2019-02-18, HR-REP, 4500, 0.15, 98, 40

99, Prince, Rohith, PRohith @ xyz.com, 555-555-5555, 2021-03-20, IT-PROG, 5200, 0.20, 97, 60

100, Sai, Prashanth, SPrashanth @ xyz.com, 111-222-3333, 2018-04-22, ADD-ASST, 3000, 0.05, 99, 10

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 inventory
WHERE type_code IN(77,12,1)
    AND company = 'DJs on Demand';
```

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');
```

The logical operators AND and OR determine whether both or either conditions must be met.

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

Select l_name from employees where employer = 'Global Fast Foods' AND l_name LIKE '%e%' AND l_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 * from employees where employer = 'Global Fast Foods' AND hourly_wage > 6.50 AND position <> 'order taker';

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 * FROM employees where l_name LIKE 'D%' AND l_name like '%a%' AND l_name LIKE '%e%'.

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

Select Distinct venue from events where artist = 'DJs on Demand' AND venue <> '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 * FROM employees WHERE hire_date > TO_DATE ('1998-05-31', 'YYYY-MM-DD') AND hire_date < TO_DATE ('1999-06-01', 'YYYY-MM-DD') AND salary < 8000 AND l_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 email FROM employees where hire_date<
TO_DATE ('1996-01-01', 'YYYY-MM-DD')
AND salary > 9000 AND commission_pct is NULL;

Evaluation Procedure	Marks awarded
Practice Evaluation (5)	5
Viva(5)	4
Total (10)	9
Faculty Signature	