EXERCISE-2

MANIPULATING DATA

OBJECTIVE

After, the completion of this exercise the students will be able to do the following

- Describe each DML statement
- Insert rows into tables
- Update rows into table
- Delete rows from table
- Control Transactions

A DML statement is executed when you:

- Add new rows to a table
- Modify existing rows
- Removing existing rows

A transaction consists of a collection of DML statements that form a logical unit of work.

To Add a New Row

INSERT Statement

Syntax
INSERT INTO table_name VALUES (column1 values, column2 values, …, columnn values);

Example:
INSERT INTO department (70, 'Public relations', 100,1700);

Inserting rows with null values
Implicit Method: (Omit the column)

INSERT INTO department VALUES (30,'purchasing');

Explicit Method: (Specify NULL keyword)

INSERT INTO department VALUES (100,'finance', NULL, NULL);

Inserting Special Values

Example:

Using SYSDATE

INSERT INTO employees VALUES (113,'louis', 'popp', 'lpopp','5151244567',**SYSDATE**, 'ac_account', 6900, NULL, 205, 100);

Inserting Specific Date Values
Example:

Find the Solution for the following:

1. Create MY_EMPLOYEE table with the following structure

NAME	NULL?	TYPE
ID	Not null	Number(4)
Last_name		Varchar(25)
First_name		Varchar(25)
Userid		Varchar(25)
Salary		Number(9,2)

2. Add the first and second rows data to MY_EMPLOYEE table from the following sample data.

ID	Last_name	First_name	Userid	salary
1	Patel	Ralph	rpatel	895
2	Dancs	Betty	bdancs	860
3	Biri	Ben	bbiri	1100
4	Newman	Chad	Cnewman	750
5	Ropebur	Audrey	aropebur	1550

3. Display the table with values.

```
Select * from my-employee;
```

4. Populate the next two rows of data from the sample data. Concatenate the first letter of the first_name with the first seven characters of the last_name to produce Userid.

5. Make the data additions permanent.

```
Begin transaction;
insert into my-employee values (3, 'Biri', 'Ben',
                                'bbiri', 1100);
commit;
```

6. Change the last name of employee 3 to Drexler.

```
update my-employee set last_name = 'Drexler'
~~salary = 1000~~ where ~~salary < 900;~~ ID = 3;
```

7. Change the salary to 1000 for all the employees with a salary less than 900.

```
update my-employee set salary = 1000 where
salary < 900;
```

8. Delete Betty dancs from MY _EMPLOYEE table.

```
delete from my-employee where first_name =
                                'dancs';
```

9. Empty the fourth row of the emp table.

?

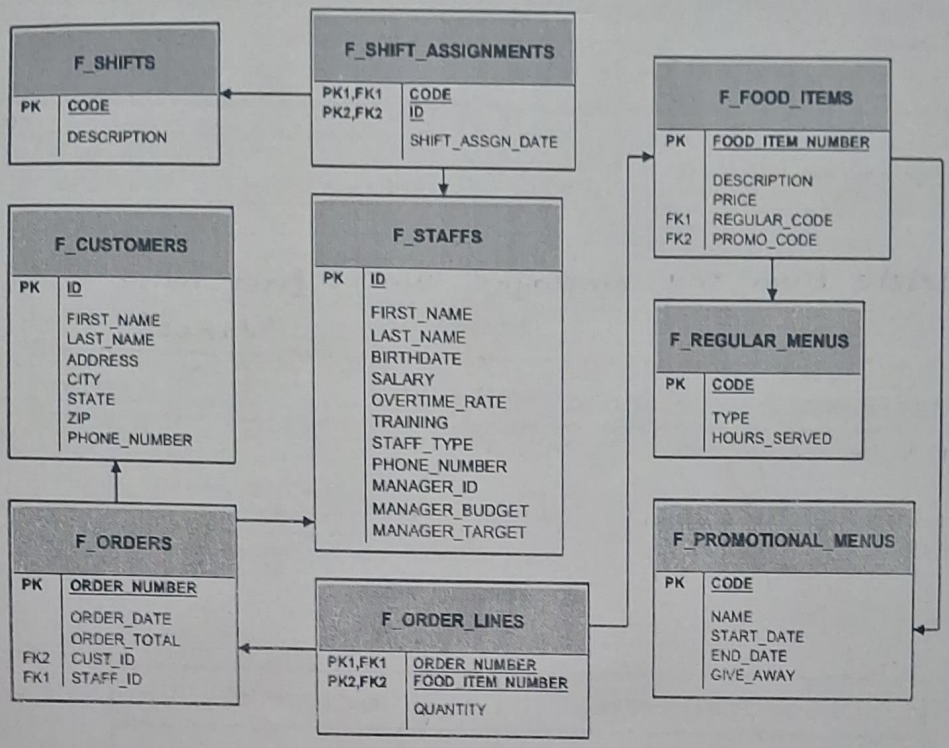
Evaluation Procedure	Marks awarded
Query(5)	
Execution (5)	
Viva(5)	
Total (15)	
Faculty Signature	

PRACTICE QUESTIONS

Date:

Working with Columns, Characters, and Rows

Global Fast Foods Database Tables



1. The manager of Global Fast Foods would like to send out coupons for the upcoming sale. He wants to send one coupon to each household. Create the SELECT statement that returns the customer last name and a mailing address.

select distinct last_name, address from f_customers;

2. Each statement below has errors. Correct the errors and execute the query in Oracle Application Express.

a.
SELECT first name FROM
f_staffs;

select first_name from f_staffs;

b.
SELECT first_name |" "| last_name AS "DJs on Demand Clients" FROM
d_clients;

Select first_name || ' ' || last_name as "DJs on demand clients" from f_customers;

c.
SELECT DISCTINCT f_order_lines
FROM quantity;

select distinct quantity from f_order_lines;

d.
SELECT order number
FROM f_orders;

select order_number from f_orders;

3. Sue, Bob, and Monique were the employees of the month. Using the f_staffs table, create a SELECT statement to display the results as shown in the Super Star chart.

Super Star
*** Sue *** Sue ***
*** Bob *** Bob ***
*** Monique *** Monique ***

```
select '***' || first_name || '***' || first_name || '***' as
'super star' from f_staffs where first_name IN
('Sue', 'Bob' 'Monique');
```

4. Which of the following is TRUE about the following query?

```
SELECT first_name, DISTINCT birthdate
FROM f_staffs;
```

a. Only two rows will be returned.
b. Four rows will be returned.
c. Only Fred 05-Jan-1988 and Lizzie 10-Nov-1987 will be returned.
d. No rows will be returned.

5. Global Fast Foods has decided to give all staff members a 5% raise. Prepare a report that presents the output as shown in the chart.

EMPLOYEE LAST NAME	CURRENT SALARY	SALARY WITH 5% RAISE

```
select last_name as 'employee last name', salary as
'current salary' salary * 1.05 as salary with 5% Raise ''
from f_staffs;
```

6. Create a query that will return the structure of the Oracle database EMPLOYEES table. Which columns are marked "nullable"? What does this mean?

```
desc employees;
```

7. The owners of DJs on Demand would like a report of all items in their D_CDs table with the following column headings: Inventory Item, CD Title, Music Producer, and Year Purchased. Prepare this report.

```
select food_item_number as 'Inventory Item' description
as 'CD Title' regular_code as 'music Product', promo_code
as 'Year Purchased' from f_food_items;
```

8. True/False – The following SELECT statement executes successfully: SELECT last_name, job_id, salary AS Sal FROM employees;

9. True/False – The following SELECT statement executes successfully: SELECT * FROM job_grades;

10. There are four coding errors in this statement. Can you identify them?

SELECT employee_id, last_name sal x 12 ANNUAL SALARY FROM employees;

Select employee_id, last_name, salary * 12 as 'Annual salary' from employees;

11. In the arithmetic expression salary*12 - 400, which operation will be evaluated first?

salary * 12 - 400

12. Which of the following can be used in the SELECT statement to return all columns of data in the Global Fast Foods f_staffs table?

a. column names
b. *
c. DISTINCT id
d. both a and b

13. Using SQL to choose the columns in a table uses which capability?

a. selection
b. projection
c. partitioning
d. join

14. SELECT last_name AS "Employee". The column heading in the query result will appear as:

a. EMPLOYEE
b. employee

c. Employee
d. "Employee:

15. Which expression below will produce the largest value?
a. SELECT salary*6 + 100
b. SELECT salary* (6 + 100)
c. SELECT 6(salary+ 100)
d. SELECT salary+6*100

16. Which statement below will return a list of employees in the following format?
Mr./Ms. Steven King is an employee of our company.
a. SELECT "Mr./Ms."||first_name||' '||last_name 'is an employee of our company.' AS "Employees" FROM employees;
b. SELECT 'Mr./Ms. 'first_name,last_name ||' '||'is an employee of our company.' FROM employees;
c. SELECT 'Mr./Ms. '||first_name||' '||last_name ||' '||'is an employee of our company.' AS "Employees" FROM employees ;
d. SELECT Mr./Ms. ||first_name||' '||last_name ||' '||"is an employee of our company." AS "Employees" FROM employees

17. Which is true about SQL statements?
a. SQL statements are case-sensitive
b. SQL clauses should not be written on separate lines.
c. Keywords cannot be abbreviated or split across lines.
d. SQL keywords are typically entered in lowercase; all other words in uppercase.

18. Which queries will return three columns each with UPPERCASE column headings?
a. SELECT "Department_id", "Last_name", "First_name"
FROM employees;
b. SELECT DEPARTMENT_ID, LAST_NAME, FIRST_NAME
FROM employees;
c. SELECT department_id, last_name, first_name AS UPPER CASE
FROM employees
d. SELECT department_id, last_name, first_name
FROM employees;

19. Which statement below will likely fail?

a. SELCT * FROM employees;
b. Select * FROM employees;
c. SELECT * FROM EMPLOYEES;
d. SelecT* FROM employees;

20. Click on the History link at the bottom of the SQL Commands window. Scroll or use the arrows at the bottom of the page to find the statement you wrote to solve problem 3 above. (The one with the column heading SuperStar). Click on the statement to load it back into the command window. Execute the command again, just to make sure it is the correct one that works. Once you know it works, click on the SAVE button in the top right corner of the SQL Commands window, and enter a name for your saved statement. Use your own initials and "_superstar.sql", so if your initials are CT then the filename will be CT_superstar.sql.

Log out of OAE, and log in again immediately. Navigate back to the SQL Commands window, click the Saved SQL link at the bottom of the page and load your saved SQL statement into the Edit window. This is done by clicking on the script name. Edit the statement, to make it display + instead of *. Run your amended statement and save it as initials_superplus.sql.

```
select '+++'||first_name||'+++'||first_name||
'+++' as 'Super Star' from f_staffs where
first_name in ('Sue','Bob','Monique');
```

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