LAB 9

Qno1:

list all tables in the employees database

Answer:

```
USE EMPLOYEE;

show TABLES;
```

Qno2:

Write a query to find the names (first_name, last_name) and the salaries of the employees who have a higher salary than the employee whose last_name='Bull'.

Answer:-

```
Select FIRST_NAME, LAST_NAME, SALARY

FROM employees

WHERE SALARY>(SELECT salary FROM employees WHERE  last_name='Bull');
```

Qno3:

Answer:-

```
Select first_name , last_name

FROM employees

WHERE department_id

IN(SELECT department_id FROM departments WHERE department_name='IT');
```

LAB 10

Qno1:-

Write a query to find the names (first_name, last_name) of the employees who have a manager and work for a department based in the United States.

Answer:-

```
SELECT first_name, last_name FROM employees

WHERE manager_id in(select employee_id FROM employees WHERE department_id

IN(SELECT department_id FROM departments WHERE location_id IN(select location_id from locations

Where country_id='US')));
```

Qno2:-

Write a query to find the names (first_name, last_name) of the employees who are managers.

Answer:-

```
SELECT first_name, last_name

FROM employees

WHERE (employee_id IN(SELECT manager_id FROM employees));
```

Qno3:-

Write a query to find the names (first_name, last_name), the salary of the employees whose salary is greater than the average salary

Answer:-

```
SELECT first_name, last_name, salary FROM employees

WHERE salary > (SELECT AVG(salary) FROM employees);
```

Qno4:-

Write a query to find the names (first_name, last_name), the salary of the employees whose salary is equal to the minimum salary for their job grade.

Answer:-

SELECT first_name,last_name,salary FROM employees WHERE employees.salary=(SELECT min_salary FROM jobs WHERE employees.job_id=jobs.job_id);

Qno5:-

Write a query to find the names (first_name, last_name), the salary of the employees who earn more than the average salary and who works in any of the IT departments.

Answer:-

SELECT first_name,last_name,salary

FROM employees WHERE department_id IN (SELECT department_id FROM departments WHERE department_name LIKE 'IT**%**')AND salary>(SELECT avg(salary) From employees);

Qno6:-

Write a query to find the names (first_name, last_name), the salary of the employees who earn more than Mr. Bell

Answer:-

SELECT * FROM employees WHERE salary > ALL(SELECT AVG(salary) FROM employees GROUP BY

Department_id);

Qno7:-

Write a query to find the names (first_name, last_name), the salary of the employees who earn the same salary as the minimum salary for all departments

Answer:-

SELECT * FROM employees

WHERE salary=(SELECT MIN(salary) FROM employees);

Qno8:-

Write a query to find the names (first_name, last_name), the salary of the employees whose salary greater than the average salary of all departments

Answer:-

SELECT first_name,last_name from employees whose(SELECT AVG(salary) from departments)

Qno9:-

Write a query to find the names (first_name, last_name) and salary of the employees who earn a salary that is higher than the salary of all the Shipping Clerk (JOB_ID = 'SH_CLERK'). Sort the results of the salary of the lowest to highest

Answer:-

```
SELECT first_name,last_name, job_id, salary

FROM employees

WHERE salary >

ALL (SELECT salary FROM employees WHERE job_id = 'SH_CLERK') ORDER BY salary;
```

Qno10:-

.Write a query to find the names (first_name, last_name) of the employees who are not supervisors.

Answer:-

```
SELECT b.first_name,b.last_name

FROM employees b

WHERE NOT EXISTS (SELECT 'X' FROM employees a WHERE a.manager_id = b.employee_id);
```

Qno11:-

Write a query to display the employee ID, first name, last names, and department names of all employees.

Answer:-

```
SELECT employee_id, first_name, last_name,

(SELECT department_name FROM departments d

 WHERE e.department_id = d.department_id) department

 FROM employees e ORDER BY department;
```

Qno12:-

Write a query to display the employee ID, first name, last names, salary of all employees whose salary is above average for their departments

Answer:-

```
SELECT employee_id, first_name
FROM employees AS A
WHERE salary >
(SELECT AVG(salary) FROM employees WHERE department_id = A.department_id);
```

Qno13:-

Write a query to fetch even numbered records from employees table

Answer:-

```
SET @i = 0;
SELECT i, employee_id
FROM (SELECT @i := @i + 1 AS i, employee_id FROM employees)
a WHERE MOD(a.i, 2) = 0;
```

Qno14:-

Write a query to find the 5th maximum salary in the employees table.

Answer:-

```
SELECT DISTINCT salary
FROM employees e1
WHERE 5 = (SELECT COUNT(DISTINCT salary)
FROM employees  e2
WHERE e2.salary >= e1.salary);
```

Qno15:-

Write a query to find the 4th minimum salary in the employees table

Answer:-

```
SELECT DISTINCT salary
```

FROM employees e1

WHERE 4 = (SELECT COUNT(DISTINCT salary)

FROM employees e2

WHERE e2.salary <= e1.salary);

Qno16:-

Write a query to select last 10 records from a table.

Answer:-

SELECT * FROM (

SELECT * FROM employees ORDER BY employee_id DESC LIMIT 10) sub

ORDER BY employee_id ASC;

Qno17:-

Write a query to list department number, name for all the departments in which there are no employees in the department

Answer:-

SELECT * FROM departments

WHERE department_id

NOT IN (select department_id FROM employees);

Qno18:-

Write a query to get 3 maximum salaries.

Answer:-

SELECT DISTINCT salary

FROM employees a

WHERE 3 >= (SELECT COUNT(DISTINCT salary)

FROM employees b

WHERE b.salary >= a.salary)

ORDER BY a.salary DESC;

Qno19:-

Write a query to get 3 minimum salaries

Answer:-

SELECT DISTINCT salary

FROM employees a

WHERE 3 >= (SELECT COUNT(DISTINCT salary)

FROM employees b

WHERE b.salary <= a.salary)

ORDER BY a.salary DESC;

Qno20:-

Write a query to get nth max salaries of employees.Further practice with nested queries

Answer:-

SELECT *

FROM employees emp1

WHERE (1) = (

SELECT COUNT(DISTINCT(emp2.salary))

FROM employees emp2

WHERE emp2.salary > emp1**.salary);**

LAB11

Qno1:-

Create a table tow columns for name and family_name respectively. Insert the names your three friends in lower case case caracters. Write a query to create columns aliased fullname by using the INITCAT() and CONCAT() functions.

Answer:-

SELECT customer_id, CONCAT(first_name,second_name,last_name)AS All_names from customer

LAB12

Qno1:-

Print countrycode and sum of percentage from countrylangauge, apply groupby on countrycode.

Answer:-

SELECT countrycode ,SUM(PER(countrylanguage) from country language Group By(countrycode)

Qno2:-

Find sum of any integer column from country table.

Answer:-

Select SUM(population) from country table;

Qno3:-

Count number of records in country table

Answer:-

SELECT COUNT(records) from countrytable;

Qno4:-

Count Distinct (languages) from countrylanguage

Answer:-

SELECT DISTINCT(languages) from countrylanguage;

LAB13

Qno1:-

Select customers name, number , phone from customers table, select checknumber from payments table. Display it for all customers. [either they have made payment or they haven't include all customers].

Answer:-

SELECT customer,phone from customertable;

SELECT checknumber from payment;

Qno2:-

Display orderdetails for products. Use inner join.

Answer:-

LAB14

Qno1:-

Update customer with any a particular order number (you can select any order number).

```
UPDATE customer
SET order_no = 5;
```

Qno2:-

Applying union print data of orders and order details table.

Answer:-

```
SELECT data.customerdata from customers
UNION ALL
SELECT order.orderdata FROM orders;
```

LAB15

Qno1:-

Apply update on any country name.

Answer:-

UPDATE country SET column1=”England” WHERE column=”Islamabad”;

Qno2:-

Delete Islamabad city by applying delete query on city table with it’s ID

Answer:-

```
DELETE FROM city
WHERE country.id = ANY (SELECT id FROM city WHERE id = 2);
```

Qno3:-

Try to update values for null column COMM column

Answer:-

UPDATE[city]

SET [COMM]=0

WHERE [COMM] is null;

Qno4:-

Try to update it for a specific employee whose salary is less than 1000

Answer:-

UPDATE employee WHERE employee<1000;

Qno5:-

Try to insert values in customers table

Answer:-

```
INSERT INTO city
VALUES ("Rawalpindi", "Sialkot", "Mirpur");
```

LAB16

Qno1:-

The first column is called supplier_id which is created as a number data type (maximum 10 digits in length) and cannot contain null values.

Answer:-

CREATE TABLE suppliers(supplier_id int(10) NOT NULL);

Qno2:-

The second column is called supplier_name which is a varchar2 datatype (50 maximum characters in length) and also can not contain null values

Answer:-

CREATE TABLE suppliers(supplier_id int(10) NOT NULL,supplier_name varchar2(50) NOT NULL);

Qno3:-

The third column is called address which is a varchar2 data type but can contain null values.

Answer:-

CREATE TABLE suppliers(supplier_id int(10) NOT NULL,supplier_name varchar(50) NOT NULL,address varchar2 NOT NULL);

Qno4:-

Define the supplier_id as the primary key

Answer:-

CREATE TABLE suppliers(supplier_id NOT NULL AUTO_INCREMENT,supplier_id int(10) NOT NULL,supplier_name varchar(50) NOT NULL,address varchar2 NOT NULL,PRIMARY KEY(supplier_id);

Qno5:-

Create a second table named as Item with columns:

Answer:-

CREATE TABLE Item();

Qno6:-

The first column itemname any length you want

Answer:-

CREATE TABLE Item(itemname varchar(255);

Qno7:-

The second column supplierId as foreignkey in item table

Answer:-

```
CREATE TABLE item (
    itemname varchar(255),
    FOREIGN KEY (supplier_id) REFERENCES Persons(supplier_id)
);
```

Qno8:-

The third column should be itemprice In INT

Answer:-

```
CREATE TABLE item (
    itemname varchar(255),

    Itemprice int NOT NULL,
    FOREIGN KEY (supplier_id) REFERENCES Persons(supplier_id)
);
```

LAB17

Qno1:-

LAB20

Qno1:-

Write a SQL function to convert temperature from Fahrenheit to Celsius scale

Answer:-

```
DECLARE
   temp1     NUMBER := &input_a_temp;
   t_scale   CHAR := '&input_temp_scale';
   new_temp  NUMBER;
   new_scale CHAR;
 BEGIN
   IF t_scale != 'C'
     AND
     t_scale != 'F' THEN
     dbms_output.Put_line ('The scale you input is not a valid scale');
     new_temp := 0;
     new_scale := 'C';
   ELSE
     IF t_scale = 'C' THEN
       new_temp := ( ( 9 * temp1 ) / 5 ) + 32;
       new_scale := 'F';
     ELSE
       new_temp := ( ( temp1 - 32 ) * 5 ) / 9;
       new_scale := 'C';
     END IF;
   END IF;
   dbms_output.Put_line ('The new temperature in scale '
```

```
    ||new_scale
    ||' is: '
    ||new_temp);
  END;
/
```

Qno2:-

Write a SQL function to find GP and letter grade from percentage marks as per CIIT grading system.

Answer:-

```
SELECT
  *,
  (Asst1 + Asst2 + Exam) AS TotalMark,
  (IF(TotalMark > 84.5, 'A', IF (TotalMark > 64.5, 'B',
     IF(TotalMark > 49.5, 'C', IF (TotalMark > 29.5, 'D', 'E'))))) AS Grade
FROM Results
```