

# FACULTY OF COMPUTING & INFORMATION TECHNOLOGY

UNIVERSITY OF THE PUNJAB



## Database Systems: Assignment - 03

BS-DS(Morning/Afternoon) Fall 22

**Due Date: 11-03-2024**

### Instructions

- Work on this Assignment individually.
- In case of any ambiguity, benefit will be given to the students.
- First read the query statement carefully before solving it.
- Plagiarism will not be tolerated and it will result in **ZERO**.
- You are supposed to do it on blank papers/ any register paper / any Sheets.
- Solve all the Queries.
- Assignment should be **HANDWRITTEN**.

You have to write all these Queries

**Total marks: 100**

Assignment from Ch 1 , 2 , 3 , 4 , 5 , 6

### For Example:

Query: Find All Rows from a Table name customers.

SQL : `SELECT * FROM customers;`

Query: Find All Rows from a Table named customer with city New York.

SQL : `SELECT * FROM customers  
WHERE city = 'New York';`

**==> For Question 1 to 24 & 26 to 30 use these tables:**

**Table==> EMP (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO)**

**Table==> DEPT (DEPTNO, DEPTNAME, LOC)**

**Table==> SALGRADE (GRADE, HISAL, LOSAL)**

## **SUBQUERIES**

**Question 01:** Find the names of employees who earn more than the average salary.

**Question 02:** Find the departments where the maximum salary is greater than \$100,000.

**Question 03:** List the employees who have a higher salary than the lowest paid employee in the Sales department.

**Question 04:** Find the employees name who are not managers.

**Question 05:** Find the List of departments with more than 5 employees. (department having more than 5 employees)

**Question 06:** Find the average salary of employees who joined after 2010.

**Question 07:** Select the employees who have no manager.

**Question 08:** Retrieve the employees who have a salary greater than the average salary of their department.

## **GROUP FUNCTIONS**

**Question 09:** Find the highest salary in the company.

**Question 10:** Calculate the average age of employees.

**Question 11:** Count the number of employees in each department.

**Question 12:** Create a query to display the name and hire date of any employee hired after employee SCOTT.

**Question 13:** Determine the total number of employees.

**Question 14:** Calculate the sum of salaries for employees hired after 2015.

**Question 15:** Find the minimum salary in each department.

**Question 16:** Calculate the average years of service for employees.

**Question 17:** Calculate the total salary expenditure for each department.

## JOINS

**Question 18:** Find the departments with no employees.

**Question 19:** Retrieve the details of employees along with their department names.

**Question 20:** List the employees who work in the same department as 'John Doe'.

**Question 21:** Select the employees who have not been assigned to any department.

**Question 22:** Retrieve the names of employees and their managers.

**Question 23:** Retrieve the names of workers along with the names of their managers in the following format: "Last Name of Worker works for Last Name of Manager".

**Question 24:** List the employee ID, last name, and department ID of all employees who are managers and are located in the same department as manager with ID 149. Additionally, display the department ID and location ID of their respective departments.

**Question 25:** Explain different type of joins briefly. (3 to 4 lines description)

## GENERAL QUERIES

**Question 26:** List employees who don't have a manager (MGR is NULL) and display their names, job titles, and department names.

**Question 27:** Write a query that displays employees name, manager number, hire date, commission of those employees whose work under manager 7902, 7566, 7698 and 7777. And also he is working as a "CLERK".

**Question 28:** Write a query that displays job, department number, department name, manager number and hire date in this format '17 June 1898'. Also display "No Commission" in null values of commission.

**Question 29:** Write a query that will find all employees data who are hired in the months between March to June and name starts with 's'.

**Question 30:** List employees who were hired before their respective managers and show their names, hire dates, and their manager's name.

---

😊😊😊 BEST OF LUCK 😊😊😊

---

**Instructor:**

*Farhan Ahmad Ch.*

**Teaching Assistant:**

*Chaudhary Abubakar Khalid*  
(BSEF20A509)