**CC – 215 Database Systems**

***CS Fall 2020***

**LAB – 01**

*Hope you are fine and feeling yourself comfortable and exciting to play with Structured Query Language (SQL) in this lab. You have been taught in the lecture about SQL and query writing. Why not to get all what you have learned with a hands-on experience? So, let’s Start!*

**The objective of this lab is to:**

1. Introduction to SQL language
2. Basic SQL queries.

**Course & Lab Instructor:** Sir Asif Sohail

Instructions:

* Gossips are not allowed. So be gentle and do what you know. The lab is not to deduct your sessional marks but to prepare you to achieve good marks in quizzes, mids and finals and finally have good grades. So, try to perform all your tasks in time and at your own.
* Teacher assistants are for your help, so be nice with them. Respect them as they are teaching you. Raise your hands if you have some problem and need help from TA.
* Avoid calling them by raising your voice and disturbing the environment of Lab.
* You must revise the content of the past lectures before starting the lab, it will help you resolve most of your general queries and give you the confidence that you can do it.
* Evaluation will be considered final and you cannot debate for the marks. So, focus on performing the tasks when the time is given to you.
* TA may deduct your marks for any kind of ill-discipline or misconduct from your side.
* Evaluation of tasks will be conducted in lab.
* Anyone caught being indulged in the act of plagiarism would be awarded an “F” grade in lab.
* Finally, pray before you start. And, Best of Luck!
* **Max Time: 50mins.**

**Task 01: [5 Marks]**

1. List all rows of the table DEPT.
2. Show the structure of employee table.
3. List ENAME, JOB, SAL, QUARTER YEAR SAL, HALF YEAR SAL and ANNUAL SAL of the table EMP.
4. List STD\_NAME as “Students” of the table PUCIT
5. Change The Column Heading Job into Designation without using alias.

**Task 02: [12 Marks]**

1. Select all the unique jobs from employee table. Name the column as Distinct jobs.
2. Display record of all employees with dept no appearing as a first column.
3. Display the employee’s name, salary, salary + commission as total salary, salary decrease by 30% and label this column new salary.

**(Note:** Salary to be decreased by 30% should be original salary.**)**

1. Display the name concatenated with the job. Separated by a comma and space, and name the column Employee and Title.

Format: ***Employee name, Employee job***

1. Write a query to display all the data from the Dept table. Separate each column by a comma, Name the column The Output as given in image below



1. Generate a salary report of all the employees with their original salary, house rent, medical allowance, conveyance and tax and Take Home Salary.

The percentages of the attributes are;

**Home Rent: 20% of the original salary**

**Medical Allowance: 5% of the original salary**

**Conveyance: 7% of the original salary**

**Tax: 3% of the original salary**

**Task 03: [3 Marks]**

1. IS SQL Queries being case sensitive and what about the data stored in Database, check if this statement runs?

**SeLeCt eNaMe, empNO fRom EmP**

**SQL Syntax is case sensitive:** Yes / No

**DB Data is case sensitive:** Yes / No

**Given statement runs perfectly:** Yes / No

1. Identify all possible errors in the statement.

**Select ENAME as Name of Employee, Job, Sal, Sal x 12 as salary from emp.**