# High Impact Skills Development Program

# in Artificial Intelligence, Data Science, and Blockchain

# Lab 03: DDL and DML

# Instructor: Dr. Bilal Ali

# Lab Engineer:

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**Introduction**

This lab will focus on the DML (Data Manipulation Language) and DDL (Data Definition Language) part of SQL. It discusses how to create relations and manipulate data in SQL.

**Objectives**

After completing this lab, you should be able to do the following:

* Create relations in a database
* Create constraints including NOT NULL, Unique Key Constraint, Primary Key, Foreign Key
* Add, update and delete data in created table.

**Tools/Software Requirement**

* MySQL Community Server 5.6
* MySQL Workbench 6.1

**Description**

**Actions taken when DELETE or UPDATE operation is performed**

When a referential integrity constraint violation occurs in case of delete or update operation, you can specify one the operations as a response.

CREATE TABLE employees(

employee\_id INT,

first\_name VARCHAR(20),

job\_id INT NOT NULL,

dept\_id INT,

CONSTRAINT emp\_emp\_id\_pk

PRIMARY KEY (EMPLOYEE\_ID),

CONSTRAINT emp\_dept\_id\_fk

FOREIGN KEY (dept\_id) references departments (department\_id)

);

**Inserting Values**

The syntax to insert values into a table is as follows:

INSERT INTO employees

Values(2,'John',10,2);

There is an implicit and explicit method to add values to a table.

* Implicit method: Omit the column from the column list.

INSERT INTO employees (employee\_id, first\_name)

Values(2,'John');

* Specify the NULL keyword in the VALUES clause.

INSERT INTO employees

Values(2,'John',NULL, NULL);

* Adding multiple rows at a time:

INSERT INTO employees

Values(2,'John',10, NULL),(3,'Smith',12, NULL);

**Deleting Values**

The syntax to delete values from a table is as follows:

DELETE FROM table\_name

[WHERE condition];

**Updating Values**

The syntax to insert values into a table is as follows:

UPDATE *table*

SET *column* = *value* [, *column* = *value, ...*]

[WHERE *condition*];

**Lab Task**

1. Create Table Employees as mentioned in the above.
2. Add five employees’ data
3. Display all the data of 5 employees
4. **U**pdate the data of 2 employees
5. Repeat step 3 and compare results
6. Delete the data of 1st entered employee
7. Repeat step 3 and compare results