SQL Programming

Objective:
This course aims to empower participants the key skills, knowledge, tips and tricks to use and manipulate any relational database with ease.

Participants will learn how to create, query and retrieve any data from any tables or multiple tables from any database using SQL.

Who should Attend?
The course is designed for beginners with no prior Database experience and wants to use SQL to query databases. It is suitable for all walks of life like Students, working professionals and PMETs.

Equipment:
Require 01 x Windows-based desktop/notebook computer with MySQL installed.

Pre-requisite:
Basic computer literacy is required. Knowledge of database concepts would be helpful but is not necessary.

Course Outline

Database Fundamentals
- What is Database?
- What is SQL
- Connect to database and perform query

Database Design
- Database diagrams
- Designing database diagrams
- What is Normalization
- ER Modeling

Working with tables
- Creating tables
- Allowing nulls
- Identity fields
- Joining tables

Data Manipulation Language
- SELECT, DISTINCT Operations
- Functions
- Ordering Data
- Inserting, Updating & Deleting rows

SQL Queries
- Writing queries
- Indentation and case
- Setting criteria using WHERE
- Wildcards
- Setting criteria for dates
- Dealing with nulls

Calculations
- Calculated columns
- Aliases
- String functions and concatenation
- Using GetDate
- Converting dates
- Useful date functions

Aggregation and grouping
- SUM, AVG, MIN, MAX
- Counts
- Grouping by fields
- Using HAVING to filter result