Fundamentals of Databases Using MySQL

Course length: 1 days

Course Description

Storing and accessing data are part of a person's day-to-day activities. One of the most efficient and powerful ways of managing data is by using databases. Information can be stored, linked, and managed using a database application such as MySQL 5.1. In the Fundamentals of Databases Using MySQL course, you will work with the databases using MySQL.

Course Objective: You will work with databases by identifying the fundamental concepts of databases, creating a preliminary database design, applying normalization techniques, and familiarizing yourself with relational database management systems. Using various SQL commands, indexes, and views, you can work with and modify data efficiently within a database. Using features such as Enterprise Monitor and MySQL Administrator, you can manage users and administer and monitor a database.

Target Student: This course is designed for people who are familiar with the Windows environment and any Office productivity application, and who wish to acquire competency in performing basic database operations and administration using the MySQL RDBMS or various similar SQL-based RDBMS products. The other student profile would be IT systems managers who will be working within a MySQL RDBMS-based enterprise IT department and need to interact in a productive manner with MySQL RDBMS technical professionals. It can also be used by students who wish to gain familiarity with database system terminologies and usage so as to pursue a career as a MySQL RDBMS technical professional.

Prerequisites: To be successful in this course, you should have some familiarity with the Microsoft Windows environment, Microsoft Office applications, or similar office productivity applications. The following courses or equivalent experience is suggested:

- Introduction to Personal Computers: Using Windows Vista™
- Windows XP Professional: An Introduction

In addition, some experience with a programming language such as C++ is helpful but not required. The following courses or equivalent experience is suggested:

- Introduction to Programming Using C++

Delivery Method: Instructor-led, group-paced, classroom-delivery learning model with structured hands-on activities.

Performance-Based Objectives

Upon successful completion of this course, students will be able to:

- Identify the fundamental concepts of databases and explore the MySQL RDBMS interface elements.
- Create a preliminary database design.
- Apply normalization techniques to a database.
- Use SQL commands to execute simple queries.
- Use SQL compound statements to query efficiently.
- Manage databases by creating views, indexes, and transactions.
- Administer and maintain a database.

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Apptius Training Centre

Course Outline

Course Content

Lesson 1: Familiarizing Yourself with the Fundamentals of Databases
Topic 1A: Identify the Database Development Life Cycle
Topic 1B: Explore the MySQL RDBMS

Lesson 2: Creating a Preliminary Database Design
Topic 2A: Analyze Database Requirements
Topic 2B: Identify Key Fields
Topic 2C: Create Entity Relationship Diagrams

Lesson 3: Applying Normalization Techniques
Topic 3A: Normalize Tables
Topic 3B: Denormalize Tables

Lesson 4: Using the SQL Commands to Work with Tables
Topic 4A: Discuss Structured Query Language (SQL)
Topic 4B: Create Tables Using the Data Definition Language (DDL) Commands
Topic 4C: Modify Data Using Data Manipulation Language (DML) Commands

Lesson 5: Working with Databases
Topic 5A: Use SQL Compound Statements
Topic 5B: Create Triggers

Lesson 6: Managing Databases
Topic 6A: Create Indexes
Topic 6B: Create Views
Topic 6C: Create Transactions

Lesson 7: Administering a Database
Topic 7A: Perform Database Administration
Topic 7B: Perform Backup and Recovery

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