

Fundamentals of Databases Using Oracle

Course length: 1 day

Course Description

You have worked with documents using a manual processing system to store and access the data in them. Databases provide one of the most efficient and powerful ways for storing and managing data. Information can be stored, linked, and managed using a database application such as Oracle 11g. In the Fundamentals of Database Using Oracle course, you will learn the fundamentals of databases using Oracle 11g.

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 the SQL and PL/SQL commands, you can query and work with a database, and using the various Oracle 11g interface elements and tools, you can administer a database, and also manage users and permissions to store an organization's data.

Target Student: Target students can be persons who have a technical background in using a desktop computer database and who wish to acquire competency in Oracle systems terminology and usage so as to pursue a career as an Oracle technical professional. Students can also be IT systems managers or administrators who will be working within an Oracle-based enterprise IT department and need to interact in a productive manner with Oracle technical professionals.

Prerequisites: The following course or equivalent experience is required:

- Introduction to Programming Using C++

Familiarity with using Windows environment, Microsoft Office applications, or similar Office productivity applications is also desired.

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 familiarize yourself with Oracle 11g interface elements.
- Create a preliminary database design.
- Apply normalization techniques to a database.
- Use the SQL commands in the Oracle 11g interface and execute simple queries.
- Work with the PL/SQL commands to manipulate data.
- Manage databases.
- Administer a database.

Course Content

Lesson 1: Familiarizing Yourself with the Fundamentals of Database

Topic 1A: Identify the Database Development Life Cycle

Topic 1B: Explore the Oracle 11g 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: Use the Data Definition Language (DDL) Commands

Topic 4B: Use the Data Manipulation Language (DML) Commands

Lesson 5: Using the PL/SQL Commands to Manipulate Data

Topic 5A: Use the PL/SQL Blocks

Topic 5B: Work with Packages

Topic 5C: Create Triggers

Lesson 6: Managing Databases

Topic 6A: Work with Tablespaces

Topic 6B: Create Indexes

Topic 6C: Apply Sequences

Topic 6D: Use Views

Topic 6E: Use Object Relational Databases

Lesson 7: Administering a Database

Topic 7A: Identify Database Administrator Tasks

Topic 7B: Create a Database

Topic 7C: Manage Memory

Topic 7D: Manage Processes

Appendix A: Managing Users and Permissions

Supplemental Lesson Managing Users and Permissions

Topic 1A: Manage Users

Topic 1B: Manage User Permissions

