

DB2 Family Fundamentals - CE031G

Course Summary

Description

This course provides you with information about the functions of IBM's DB2, a relational database manager which may be installed under a variety of operating systems on many hardware platforms.

DB2 runs under the z/OS, VM, Linux, UNIX, and Windows operating systems, to name a few. The course includes discussion of how the DB2 products provide services. The focus is on the services DB2 provides and how we work with DB2, not on its internal workings.

Objectives

After taking this course, students will be able to:

- List and describe the major components of IBM's relational database, DB2
- Explain the characteristics of a DB2 table
- Relate the basic concepts of data modeling
- Comprehend the processing instructions given to DB2 via simple SQL statements
- List and describe several ways to build (write) and execute SQL statements
- List and describe steps needed to embed SQL statements in an application program
- Explain some of the functions performed by, and the responsibilities of, database and system administrators
- Establish a base for more specialized DB2 education

Topics

- Understanding a Table
- Data Modeling and Database Design
- How does a User use DB2?
- How does a Programmer use DB2?
- What does an Administrator do in DB2?
- Information Management with DB2

Audience

This basic course is for persons needing an introductory knowledge of DB2, and persons preparing for advanced and specialized DB2 education.

Prerequisites

Basic knowledge in data processing

Duration

Two days

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Course Outline

- I. *Understanding a Table*
 - A. Identify the advantages of a relational database
 - B. Define a relation
 - C. Name the language used to talk to a relational database manager (RDBM)
 - D. List three characteristics assigned to each column
 - E. Define the tasks performed by DB2 when running an application
 - F. Define the roles that are performed within DB2
- II. *Data Modeling and Database Design*
 - A. State the purpose of a business model
 - B. Identify an Entity-Relational Diagram (ERD) model
 - C. List several DB2 column data types
 - D. Identify non-standard column and table names
 - E. Identify the characteristics of a primary key and a foreign key
 - F. State the purpose of referential integrity
 - G. State the purpose of triggers
- III. *How does a User use DB2?*
 - A. List several ways to talk to DB2
 - B. List multiple ways to generate an SQL statement
 - C. List several ways to ADD, REMOVE, or CHANGE table rows
 - D. List several ways to READ data and produce reports
- IV. *How does a Programmer use DB2?*
 - A. List the steps needed to create a test environment
 - B. List the necessary steps to coding SQL in a program
 - C. Describe the purpose of SQL delimiters
 - D. Describe the purpose of an SQLCA
 - E. List the steps involved in preparing a program for execution
 - F. State the differences between static and dynamic SQL
- V. *What does an Administrator do in DB2?*
 - A. List some of the tasks performed by a DB2 System Administrator: Identifying the DB2 product, Installing DB2, Creating subsystems/instances, databases and table spaces, Authorizing, and Monitoring
 - B. List some of the tasks performed by a DB2 Database Administrator: Creating, altering and dropping tables, views and indexes, Planning locking strategies, Running utility jobs and Authorizing
- VI. *Information Management with DB2*
 - A. List several planning considerations for distributing data
 - B. List some of the skills required to successfully distribute data
 - C. Differentiate between remote unit of work, distributed unit of work, and distributed request
 - D. List some of the security concerns when dealing with distributed data
 - E. List some of the other products that interface with DB2