

REVIEW LESSON

MTA Course: Database Administration Fundamentals

Lesson name: Database Fundamentals 4.2

Topic: Understand primary, foreign, and composite keys (One 50-minute class period)

File name: DBAdminFund_RL_4.2

Lesson Objective:

4.2: Understand Primary, foreign, and composite keys. *This objective may include but is not limited to:* understanding the reason for keys in a database, choosing appropriate primary keys, selecting appropriate data type for keys, selecting appropriate fields for composite keys, understanding the relationship between foreign and primary keys.

Preparation Details

Prerequisite student experiences and knowledge

An understanding of primary, foreign, and composite keys is required for this lesson. The primary focus of this review will be on primary and foreign keys.

This MTA Certification Exam Review lesson is written for students who have learned about database administration. Students who do not have the prerequisite knowledge and experiences cited in the objective will find additional learning opportunities using resources such as those listed in the Microsoft® resources and Web links at the end of this review lesson.

Instructor preparation activities

None

Resources, software, and additional files needed for this lesson:

Microsoft PowerPoint® viewer and projector

- DBAdminFund_PPT_4.2

Teaching Guide

Essential vocabulary:

primary key—a key that serves as the unique identifier of a specific tuple (row) and uniquely defines a relationship within a database.

foreign key—a reference to the primary key in another table.

data integrity—consists of a set of rules which dictate what types of data manipulation are allowed on referenced values and how these actions affect dependant values. The implementation of these rules in the database provides assurance that data is consistent, correct, and usable throughout the database..

Composite key—a key that consists of 2 or more attributes that uniquely identify an entity occurrence. Each attribute that makes up the compound key is a **simple key** in its own right

Lesson Sequence

Activating prior knowledge/lesson staging (5 minutes)

1. *Say:* During the last lesson, we reviewed levels of normalization. In today's lesson, we focus on primary and foreign keys. Before we start the review presentation, let us refresh our basic definitions of primary and foreign keys.

Lesson activity (35 minutes)

1. Present the DBAdminFund_PPT_4.2 PowerPoint slideshow.
2. If time allows, refer to the tables used in previous lessons. Discuss keys and data integrity in terms of those tables.

Assessment/lesson reflection (10 minutes)

1. There are questions on the last slide of the presentation. These provide an opportunity to have a class discussion. If you choose a formal assessment, you can turn this into a written quiz. The use of small student whiteboards works very well here as lesson reflection tool.

Microsoft resources and Web links

Faculty Connection Academic Resource Center

(<http://www.microsoft.com/education/facultyconnection/ARC/ResourceCenter.aspx?c1=en-us&c2=0>)

MSDN keys

(<http://msdn.microsoft.com/en-us/library/ms190765.aspx>)