REVIEW LESSON

MTA Course: Database Administration Fundamentals
Lesson name: Database Fundamentals 2.1
Topic: Choosing data types (One 50-minute class period)
File name: DBAdminFund_RL_2.1

Lesson Objective:

2.1: Choose data types. *This objective may include but is not limited to:* understanding what data types are, why they are important, and how they affect storage requirements. (This lesson focuses on Microsoft® Access®, MySQL, and Microsoft SQL Server® data types.)

__Preparation Details__

Prerequisite student experiences and knowledge

This MTA Certification Exam Review lesson is written for students who have learned about database administration and have an understanding of creating database objects. 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:

- DBAdminFund_PPT_2.1

Teaching Guide

Essential Vocabulary:

data type—a definition of a set of data that specifies the possible range of values of the set, the operations that can be performed on the values, and the way in which the values are stored in memory.

integer—A positive or negative "whole" number, such as 37, –50, or 76. The data type 'int' can store values from -2147,483,648 to 2,147,483,647.

floating-point number—A real number represented by a mantissa and an exponent according to a given base. The mantissa is usually a value between 0 and 1.

character—a letter, number, punctuation mark, or other symbol or control code that is represented to a computer by one unit—1 byte—of information that math functions will not be applied to.

Boolean—content that is binary, so that only one or the other can be true; includes 1 and 0, true and false and in Microsoft SQL is defined as a "bit."

Lesson Sequence

Activating prior knowledge/lesson staging (10 minutes)
1. *Say:* Today we're focusing on SQL style databases, with a special focus on data types. Data types describe the data that we store in the tables. Types specify the possible range of values of the set, the operations that can be performed on the values, and the way in which the values are stored in memory.

Lesson activity (30 minutes)
1. Present the DBAdminFund_PPT_2.1 PowerPoint® presentation.

Assessment/lesson reflection (10 minutes)
- There is a quiz on the last slide in the presentation that you can use for group discussion or as a written quiz.
- They key to this assessment/lesson reflection is to cover data types. Ask students: Why use one data type over another?

Microsoft resources and Web links

Faculty Connection Academic Resource Center
(*http://www.microsoft.com/education/facultyconnection/ARC/ResourceCenter.aspx?c1=e n-us&c2=0*)

MSDN Search—Data Types
(*http://social.msdn.microsoft.com/Search/en-US?query=data%20types&ac=3*)