

## REVIEW LESSON

MTA Course: Database Administration Fundamentals

Lesson name: Database Fundamentals 1.3

Topic: Understand data manipulation language (DML) (One 50-minute class period)

File name: DBAdminFund\_RL\_1.3

### **Lesson Objective:**

**1.3:** Understand data manipulation language (DML). *This objective may include but is not limited to:* understanding what DML is and its role in databases

### **Preparation Details**

#### **Prerequisite student experiences and knowledge**

An understanding of relational database management systems (RDBMS), with a focus on Structured Query Language<sup>®</sup> (SQL), is required for this review.

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<sup>®</sup> 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<sup>®</sup> viewer and projector.
- DBAdminFund\_PPT\_1.3

## Teaching Guide

### **Essential Vocabulary:**

**SQL** (Structured Query Language)—A database sublanguage used in querying, updating, and managing relational databases; the de facto standard for database products.

**DML** (Data Manipulation Language)—A language that is used to insert data in, update, and query a database. DMLs are often capable of performing mathematical and statistical calculations that facilitate generating reports.

**DDL** (Data Definition Language)—A language that defines all attributes and properties of a database, especially record layouts, field definitions, key fields, file locations, and storage strategy.

**SELECT**—a DML statement used to choose or retrieve data from a database.

**INSERT**—a DML statement used to add data to a database.

**UPDATE**—a DML statement used to change or modify existing data in a database.

**DELETE**—a DML statement used to remove data from a database.

## Lesson Sequence

### **Activating prior knowledge/lesson staging (10 minute)**

1. *Say:* Today, we're focusing on what DML is and its role in databases. This is a change from the last two lessons, which have been focused on the general concepts of databases.

### **Lesson activities (30 minutes)**

1. Give the PowerPoint presentation DBAdminFund\_PPT\_1.3
2. As time allows, use the tables created in the previous lesson to practice these key DML operations. Students can take turns writing statements for their classmates to execute on the tables to modify the class period database.

### **Assessment/lesson reflection (10 minutes)**

1. What statement do you use to add data?  
**INSERT**
2. What statement do you use to change data?  
**UPDATE**

**3. How do you use SELECT? Answers will vary.**

```
SELECT *  
FROM Grant_info <table>  
WHERE aid_awarded > 3600 <Field and Value>
```

The notation '<Field and Value>' above need to be changed to state that <Field relational operator (which can be =, <, > etc.) Value>

In this example, `Grant_info` is the table name, `aid_awarded` is the field name, and `3600` is the value of the conditional.

The key is to cover the Essential Vocabulary list. The questions should be based on the areas of the lesson that you believe need review.

One good suggestion is to use small whiteboards or a piece of paper and ask the students to write the definition of the essential vocabulary terms and then have the students consult the whiteboards or paper to check their understanding.

**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 Search—DML

(<http://social.msdn.microsoft.com/Search/en-US?query=DML&ac=8>)

**Additional activities (homework or enrichment):**

- *Tell students:* Study your notes from the last three reviews. A quiz will be given at the end of the next class. Tell them that you will be available to answer questions until the end of class.