STUDENT ACTIVITY 1.4 KEY: REVIEW QUIZ FOR DATABASE ADMIN FUNDAMENTALS SECTIONS 1-3 AND 1-4

MTA Course: Database Administration Fundamentals
Topic: Understand data manipulation language (DML) and understand data definition language (DDL).
File name: DBAdminFund_SA_1.4_key

Lesson Objectives:

1.3: Understand data manipulation language (DML) and

1.4: Understand data definition language (DDL).

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

▪ None

Directions to the student:

Write the complete commands to perform the following tasks in creating a student database for a school. You determine the data to be used in each task. There should be three pieces of personal data for each student and a maximum of seven classes.

Content:

Create a student database for a school. You have to decide on all elements of the database. The database must be able to perform the following steps. SHOW ALL WORK.

1. Write the command(s) to create the student database.

2. Write the command(s) to add a student with key personal data and seven classes. You determine which items could be declared as null.

3. Write the command(s) to add one class for an existing student with a maximum of seven classes.

4. Write the command(s) to update one data element in this database.

5. Write the command(s) that lists the data for a student with a given ID.

6. Label each command from questions 1–5 as either DML or DDL.

The answers will vary due to names and style. Listed here is a general answer key that the correct answers should resemble.

1. **DDL** `CREATE DATABASE Students`

2. **DDL** `CREATE TABLE class_list (first_name char(20) not null, last_name char(20) not null, student_id int not null, 1class char(40) not null, 2class char(40), 3class char(40), 4class char(40), 5class char(40), 6class char(40), 7class char(40) )`

3. Database transactions. Note: Transactions for questions 3, 4, and 5 are in DML.
    ```
    INSERT INTO class_list
    values('John,'Doe',12345,'ENG101')
    ```

    Note that the first class must be filled in because in the previous example, it was set to `not null` *when the table was created. The other classes can be* `null`.

4.  ```
    UPDATE class_list
    SET 7class = 'CIS110'
    WHERE student_id = 12345
    ```

    Note that this is just a basic update; it does not check to see if the student had a value in `7class` *already. We are just checking for general level understanding of* `UPDATE` *in this question.*

5.  ```
    SELECT *
    FROM Class_list
    WHERE student_id = 12345
    ```

6. *The key items to check for here are the use of* `SELECT` *with a call to the table and* `student_id` *as the unique key.*