Assignment 6

Part 1: ERD Diagram (2 Grades)

Musicana records have decided to store information on musicians who perform on their albums in a database. The company has wisely chosen to hire you as a database designer.

- Each musician that is recorded at Musicana has an ID number,a name, an address (street, city) and a phone number.
- Each instrument that is used in songs recorded at Musicana has a unique name and a musical key (e.g., C, B-flat, E-flat).
- Each album that is recorded at the Musicana label has a unique title, a copyright date, and an album identifier.
- Each song recorded at Musicana has a unique title and an author.
- Each musician may play several instruments, and a given instrument may be played by several musicians.
- Each album has a number of songs on it, but no song may appear on more than one album.
- Each song is performed by one or more musicians, and a musician may perform a number of songs.
- Each album has exactly one musician who acts as its producer.
- A producer may produce several albums.

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Part 2: Answer the Questions below based on the given Scenario (8 Grades)

The small retail store needs a database to manage information about its products, suppliers, and sales.

Database Requirements

1. **Products Table:**
    - **ProductID**: Unique identifier for each product (integer, primary key, auto-increment).
    - **ProductName**: Name of the product (**text**).
    - **Price**: Price of the product (**decimal**).
    - **StockQuantity**: Quantity of the product in stock (**integer**).
    - **SupplierID**: ID of the supplier providing the product (**integer, foreign key referencing Suppliers**).
2. **Suppliers Table:**
    - **SupplierID:** Unique identifier for each product (integer, primary key, auto-increment).
    - **SupplierName**: Name of the supplier (**text**).
    - **ContactNumber:** Supplier's contact number (**text**).
3. **Sales Table:**
    - **SaleID:** Unique identifier for each product (integer, primary key, auto-increment).
    - **ProductID:** Reference to the product sold (**integer, foreign key referencing Products**).
    - **QuantitySold:** Quantity of the product sold (**integer**).
    - **SaleDate:** Date of sale (**date**).

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⚠️ Submit your solution in text file with question number and the solution below it

Q1. (1 Mark) Write SQL commands to create the Products, Suppliers, and Sales tables according to the given requirements, ensuring the following:

- Foreign Key Constraints on the SupplierID in the Products table and ProductID in the Sales table.

Q2. (1 Mark) Write an SQL command to modify the Products table to add a new column called "Category" (text) to store product categories.

Q3. (1 Mark) Write an SQL command to delete the Sales table from the database.

Q4. (1 Mark) Write an SQL command to insert a new supplier into the Suppliers table with the following details:

- SupplierName: "Tech Supplies Co."
- ContactNumber: "123-456-7890"

Q5. (1 Mark) Write an SQL command to insert a new product into the Products table with the following details:

- ProductName: "Smartphone"
- Price: 299.99
- StockQuantity: 50
- SupplierID: 1

Q6. (1 Mark) Write an SQL command to update the price of the product named "Smartphone" to 349.99.

Q7. (1 Mark) Write an SQL query to display each product's total quantity sold and total revenue generated. The result should include:

- ProductID
- ProductName
- TotalQuantitySold
- TotalRevenue

Q8. Write an SQL query to find the total number of suppliers in the database.

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Bonus (2 Grades)

How to deliver the bonus?

1- Solve the problem Customer Who Visited but Did Not Make Any Transactions on **LeetCode**

2- Inside your assignment folder, create a **SEPARATE FILE** and name it “bonus.txt”

3- Copy the code that you have submitted on the website inside ”bonus.txt” file