MGA Department of IT
ITEC 3280 – Web Programming

Assignment 10: Setting Up a MySQL Database and Connecting PHP to MySQL

Objective: In this assignment, you will set up a MySQL database and modify your PHP shopping cart application to retrieve product data from the database instead of a JSON file. This is the first step in transitioning the shopping cart application to be fully database driven.

Requirements:

1. **Set Up a MySQL Database**
    a. Create a new MySQL database for the shopping cart application.
    b. Inside the database, create a table named products that will store the product details.
2. Database Schema:
    a. The **products** table should have the following columns:
        i. **id** (INT, AUTO_INCREMENT, PRIMARY KEY) – A unique identifier for each product.
        ii. **name** (VARCHAR(255)) – The name of the product.
        iii. **price** (DECIMAL(10,2)) – The price of the product.
        iv. **description** (TEXT) – A brief description of the product.
    b. After creating the table, insert some initial products into the database for testing purposes.
3. Connecting PHP to MySQL
    a. Update your PHP application to connect to the MySQL database using PDO. PDO is an efficient and secure way to work with databases in PHP.
4. Retrieve Product Data from MySQL
    a. Update the product_catalog.php file to retrieve product data from the products table using PDO instead of JSON.
5. Testing Your Application
    a. Ensure that your PHP application can retrieve product data from the MySQL database using PDO and display it on the catalog page.
    b. Test the application by adding and retrieving products from the database.

Deliverables:

- **products.sql:** SQL file containing the CREATE TABLE statement for the products table and the sample product insert statements.

- **Updated product_catalog.php:** The PHP file retrieves and displays product data from the MySQL database using PDO.
- **db.php:** A PHP file for establishing a connection to the MySQL database using PDO.

Grading Criteria:

- **Database Setup (30%):** Correct creation of the products table and insertion of sample data.
- **PHP and MySQL Connection with PDO (30%):** Properly use PDO to connect PHP to MySQL and retrieve product data.
- **Dynamic Display of Products (30%):** Correct retrieval of product data from the database and display on the product_catalog.php page.
- **Code Quality and Documentation (10%):** Clean, well-organized code with comments where necessary.