CSI 3140 - Summer 2025

LAB 8 - Restaurant Application

Due Date: Sunday July 20th at 11:59PM EST

Compress all your files and upload the Zip file to the Brightspace. Please name the file using the following format: `CSI3140_Lab_8_<student_id_1>_<student_id_2>.zip`

Objective:

The goal of this lab is to build a simple Restaurant Management System to manage the menu and handle customers' orders. The system is based on HTML, CSS, JavaScript, XML, PHP, and MySQL. Your task is to implement the HTML, CSS, JavaScript, and XML code. The PHP and MySQL files are provided.

HTML and CSS Requirements

Your webpage (`index.html`) must include:

- A `form` to edit dish prices, which includes two `input` elements: "Dish ID" and "Price".
- A `form` to place a new order. This form should include two `input` elements ("Customer name", "Quantity"), and one `select` element that provides several options for the dish.
- A `table` to view all customers' orders showing the following attributes.

Order ID	Customer	Dish	Qty	Price	Total	Time

- A `button` that lets you import orders from an XML file.

You may organize the layout however you prefer, but the design should be clean, readable, well organized and easy to use. Use CSS to style your page; Flexbox or Grid is recommended for layout but not required. No advanced design is expected.

XML

You need to import a few existing orders provided in a tabular form (as listed below) into the database. To do so, write your own XML file (`orders.xml`) to represent this data and validate it using an XSD schema (`orders.xsd`) before importing it into the database. The schema should check the following rules:

- Customer names should be of type of string.
- Dish ID should be an integer between 1 and 6 (including both 1 and 6).
- The quantity should be an integer greater than 0.
- Price should include a $ sign and be representative of a float number. You may use the following regular expression: `^\$\d+(\.\d+)?$`
- Time should be a valid time following the ISO 8601 format: YYYY-MM-DDTHH:MM:SS

Customer	Dish ID	Quantity	Price	Time
Olivia	1	2	$4.5	2025-07-01 10:15:00
Marcus	3	1	$10	2025-07-02 13:45:00
Priya	2	3	$21	2025-07-02 18:30:00
Ethan	4	1	$10	2025-07-03 12:00:00
Zoe	1	1	$4.5	2025-07-04 09:05:00
Carlos	5	2	$2.5	2025-07-04 16:50:00
Lina	2	2	$21	2025-07-05 11:20:00

SQL Database

The `restaurant.sql` file creates the following tables:

DISHES

- id, name, category, price, vegetarian

ORDERS

- id, dish_id, customer_name, quantity, order_time

All SQL changes must be done using SQL queries in JavaScript via fetch().

Development Instructions:

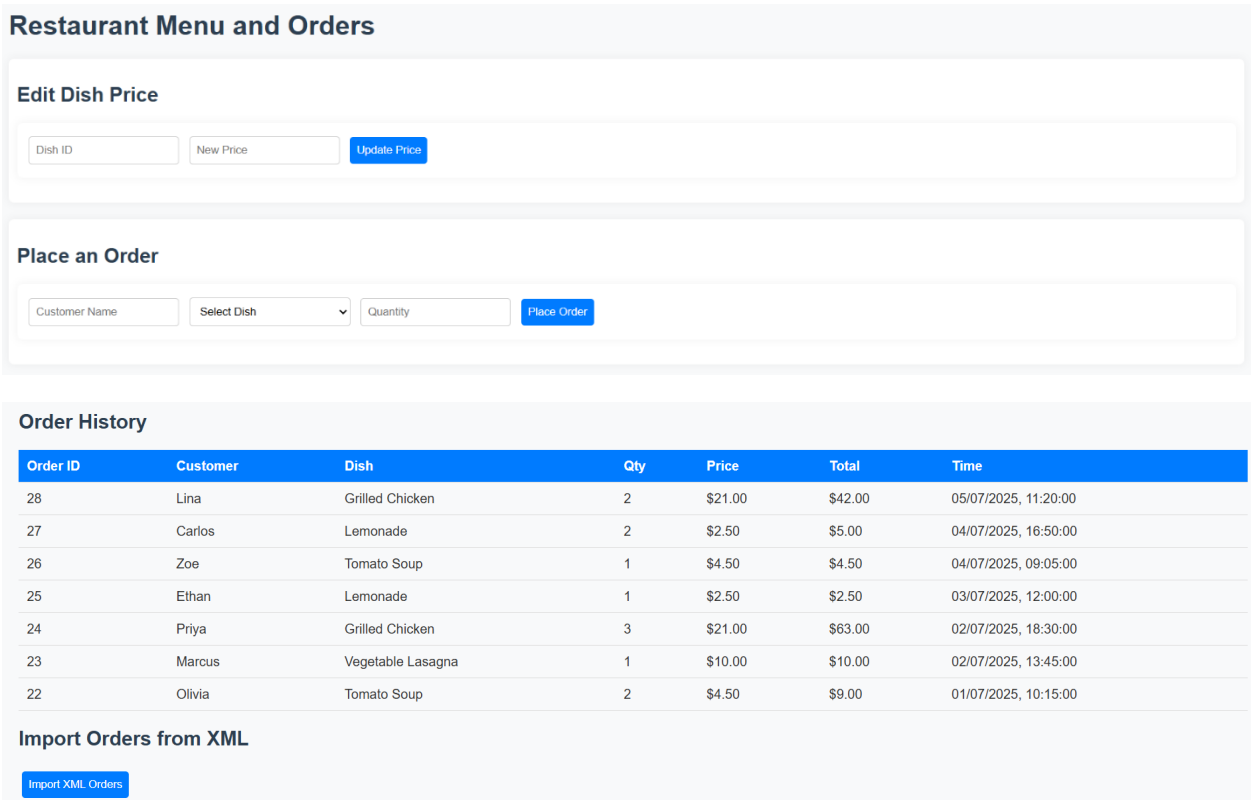
1. Start Apache and MySQL using XAMPP
2. Import `restaurant.sql` via phpMyAdmin
3. Place your files in a folder (`restaurant-lab`) in and copy that folder to:
   - `Windows: C:/xampp/htdocs`
   - `Mac/Linux: /Applications/MAMP/htdocs or /var/www/html`
4. Open your application in your browser via: http://localhost/restaurant-lab/index.html

What to Submit

Submit a .zip file containing

- All required files (`index.html`, `script.js`, `style.css`)
- Your completed `orders.xml` and `orders.xsd`

Example:


Restaurant Menu and Orders
Edit Dish Price
Dish ID
New Price
Update Price
Place an Order
Customer Name
Select Dish
Quantity
Place Order
Order History
Order ID Customer Dish Qty Price Total Time
28 Lina Grilled Chicken 2 $21.00 $42.00 05/07/2025, 11:20:00
27 Carlos Lemonade 2 $2.50 $5.00 04/07/2025, 16:50:00
26 Zoe Tomato Soup 1 $4.50 $4.50 04/07/2025, 09:05:00
25 Ethan Lemonade 1 $2.50 $2.50 03/07/2025, 12:00:00
24 Priya Grilled Chicken 3 $21.00 $63.00 02/07/2025, 18:30:00
23 Marcus Vegetable Lasagna 1 $10.00 $10.00 02/07/2025, 13:45:00
22 Olivia Tomato Soup 2 $4.50 $9.00 01/07/2025, 10:15:00
Import Orders from XML
Import XML Orders