Assignment Title: Build a Virtual Xylophone Web App with HTML, CSS, and JavaScript

#### Introduction:

In this assignment, you will create an interactive web application that simulates a xylophone. Users will be able to play musical notes by clicking on virtual xylophone keys displayed on the webpage. This project will help you understand how to structure web content, style elements, and add interactivity using HTML, CSS, and JavaScript.

## **Objectives:**

- **HTML:** Structure the webpage with semantic elements.
- CSS: Style the xylophone keys to create an appealing visual design.
- JavaScript: Add interactivity by handling events and playing audio.
- Audio Integration: Implement audio playback for each xylophone key.

### **Requirements:**

#### 1. HTML Structure:

- a. Create a webpage with a set of xylophone keys (at least 7 keys representing notes C to B).
- b. Use semantic HTML elements where appropriate.
- c. Assign unique identifiers or classes to each key for targeting in CSS and JavaScript.

### 2. CSS Styling:

- a. Style the keys to resemble a real xylophone.
- b. Use different colors for each key.
- c. Ensure the layout is responsive and works on various screen sizes.
- d. Add hover effects to enhance user interaction.

### 3. JavaScript Functionality:

- a. Attach click event listeners to each key.
- b. Play the corresponding note when a key is clicked.
- c. Provide visual feedback when a key is activated (e.g., briefly change the key's appearance).
- d. (Optional) Allow users to play notes using keyboard keys.

#### 4. Audio Files:

- a. Use audio files corresponding to each musical note.
- b. Ensure that audio playback works across different browsers.

# 5. **User Experience:**

- a. The app should be intuitive and user-friendly.
- b. Include brief instructions or labels if necessary.