**Q1) Illustrate the need for jQuery**

**Answer:** jQuery is a fast, small, and feature-rich JavaScript library. It simplifies tasks like HTML document traversal and manipulation, event handling, animation, and Ajax with an easy-to-use API that works across a multitude of browsers. Need for jQuery is as follows:

1. **Cross-browser Compatibility**: jQuery handles many cross-browser inconsistencies, making code work across different platforms.
2. **Simplified Syntax**: Complex JavaScript code can be written in fewer lines with jQuery.
3. **Animations and Effects**: Built-in animation and effects are easy to apply without writing complex code.
4. **AJAX Made Easy**: Allows seamless page updates without reloading using its AJAX functions.
5. **DOM Manipulation**: Easy traversal and manipulation of the DOM tree.
6. **Event Handling**: Binds and handles events cleanly.
7. **Plugins**: Thousands of plugins are available to extend functionality.
8. **Improved Code Readability and Maintenance**: Cleaner code is easier to read and maintain.
9. **Lightweight**: jQuery is lightweight and can be loaded via CDN.
10. **Rapid Development**: Ideal for quick development of interactive and dynamic web apps.

**Q2) Implement a small application using jQuery (Input/Output)**

**Answer: To-Do List using jQuery**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>jQuery To-Do List</title>

<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

<style>

body { font-family: Arial; margin: 30px; }

#todo-list li { margin-bottom: 5px; }

</style>

</head>

<body>

<h2>To-Do List using jQuery</h2>

<input type="text" id="todo-input" placeholder="Enter task" />

<button id="add-btn">Add</button>

<ul id="todo-list"></ul>

<script>

$(document).ready(function() {

$('#add-btn').click(function() {

const task = $('#todo-input').val();

if(task.trim() !== "") {

$('#todo-list').append('<li>' + task + ' <button class="remove">X</button></li>');

$('#todo-input').val('');

}

});

$('#todo-list').on('click', '.remove', function() {

$(this).parent().remove();

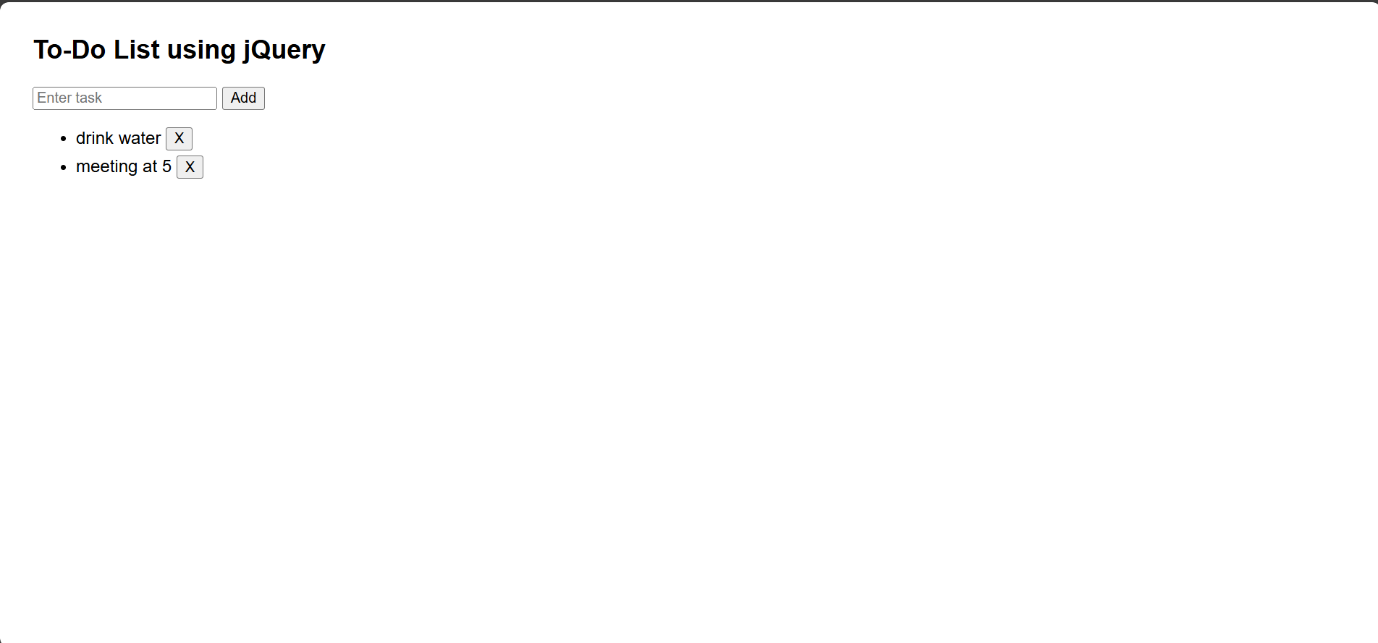
});

});

</script>

</body>

</html>



**Q3) Illustrate the need for code of ethics**

**Answer:** The **code of ethics** is essential in software development and IT for maintaining professionalism and trust. Here's why it’s important:

1. **Integrity**: Ensures developers write truthful, accurate code.
2. **Confidentiality**: Safeguards user data and proprietary information.
3. **Respect for Intellectual Property**: Prevents plagiarism and promotes original work.
4. **Professionalism**: Encourages responsible and respectful behavior.
5. **Accountability**: Developers must take responsibility for their work.
6. **User-Centric Approach**: Ensures that user needs and safety are prioritized.
7. **Compliance with Laws**: Encourages adherence to legal regulations and licensing.

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