

# Web Development Workshop: Assessment Questions

## Week 1: Foundations of Web Development & Tailwind CSS

1. What are the five main stages of the web development lifecycle?
2. Explain the primary advantage of using a utility-first CSS framework like Tailwind CSS.
3. How do you include Tailwind CSS in a project using a CDN?
4. Which Tailwind CSS utility class would you use to set a background color?
5. What is the purpose of the CSS Box Model?
6. Name the four components of the CSS Box Model.
7. How do you add margin on all sides of an element using Tailwind?
8. How do you add padding only to the top of an element using Tailwind?
9. What is the main purpose of Flexbox in CSS?
10. Which Tailwind class enables Flexbox on a container element?
11. What is the difference between `justify-content` and `align-items` in Flexbox?
12. In the context of the workshop's first week, what was the goal of the "Simple Web Page Structure" project?
13. Why is a fixed navigation bar a common feature in web design?
14. In the "Box Model Exercise," how does the `border` property affect an element's total dimensions?
15. What is the key difference between `margin` and `padding`?

## Week 2: JavaScript Fundamentals & DOM Manipulation

16. What is the difference between `let`, `const`, and the older `var` for variable declaration?
17. When would you use `console.error()` instead of `console.log()`?
18. Write a simple `if-else` statement that checks if a variable `age` is 18 or over.
19. What is the DOM and why is it important for web interactivity?
20. What is the difference between `document.getElementById('id')` and `document.querySelector('#id')`?
21. Write a `for` loop that prints numbers from 1 to 5 to the console.
22. How does a `while` loop differ from a `for` loop?
23. What is a JavaScript function?
24. What is the key syntactic difference between a regular function declaration and an arrow function?
25. What is an anonymous function?

26. In the "Simple ToDo App," what JavaScript event would you use to capture the action of a user clicking an "Add" button?
27. Describe the process of dynamically creating a new HTML element (like a list item) in JavaScript.
28. In the ToDo app, how would you implement the functionality to delete a task when a "Delete" button is clicked?
29. Why is it important to prevent the default form submission behavior when handling a button click in a ToDo app?
30. What is "event delegation" and how could it be useful in a ToDo list application?

### **Week 3: Asynchronous JavaScript & APIs**

31. Why is JavaScript's default synchronous execution a problem when fetching data from an API?
32. What is a Promise in JavaScript?
33. How does the `async` keyword change a function?
34. How do you wait for a Promise to resolve inside an `async` function?
35. What is the primary purpose of the `fetch` API?
36. What does the `fetch()` function return?
37. Why do you need to call the `.json()` method on the response from a `fetch` request?
38. What is the purpose of a `try...catch` block?
39. In the "Image Gallery" project, what two pieces of user input are used to fetch from the Picsum Photos API?
40. Describe the steps to dynamically load an image from an API and display it on a webpage.
41. How would you handle a scenario where the `fetch` request to the Picsum API fails (e.g., no internet connection)?
42. What does the `await` keyword do?

### **Week 4: Version Control, Deployment & Collaboration**

43. What is version control and what problem does it solve?
44. What is the primary purpose of Git?
45. What is the difference between Git and GitHub?
46. Describe the function of the following Git commands: `git init`, `git add .`, `git commit -m "message"`.
47. After committing your code locally, what command do you use to send it to a remote repository on GitHub?

48. If you want to contribute to an open-source project on GitHub that you don't have write access to, what is the process called?
49. After forking a repository and making changes, how do you propose those changes be merged into the original project?
50. What is the purpose of "starring" a repository on GitHub?
51. Which deployment platform is covered in the workshop for deploying static websites?
52. Briefly describe the typical steps to deploy a project from your GitHub repository to Vercel.
53. After deploying to Vercel, what is the process of connecting a custom domain name to your project called?