KIDS & TEENS FREELANCING TRAINING INSTITUTE

AJAX Course Outline

Module 1: Introduction to AJAX

- What is AJAX and what it stands for (Asynchronous JavaScript And XML)
- Real-life example: Loading new Instagram posts without refreshing
- Why AJAX is important for modern websites
- How AJAX works behind the scenes
- Activity: See a live example of AJAX in action on a website

---

Module 2: How AJAX Works

- Understanding the flow: request → server → response → update
- Real-life example: Ordering pizza and getting updates without calling again
- What happens during an AJAX call
- Difference between synchronous and asynchronous
- Activity: Draw a simple flowchart of how AJAX works

Module 3: Writing Your First AJAX Request

- How to create a basic AJAX request using `XMLHttpRequest`
- Real-life example: Checking weather updates automatically
- Sending a request and handling a response
- Basic error handling in AJAX
- Activity: Write a simple AJAX request to load a text file

Module 4: AJAX with Fetch API

- Introducing the modern way: `fetch()`
- Real-life example: Getting new products on an e-commerce page

- Using promises and `.then()` for handling data
- How fetch makes code cleaner and easier
- Activity: Use `fetch()` to load and display a JSON file

Module 5: Using AJAX to Update Webpages Dynamically

- Changing page content without reloading
- Real-life example: Updating a blog comments section live
- How to grab partial page content and inject it into your website
- Tips for faster updates
- Activity: Load a paragraph into a div with a button click

Module 6: Sending Data to Servers Using AJAX

- How to send form data without refreshing the page
- Real-life example: Submitting a signup form smoothly
- POST vs GET requests explained simply
- How to prepare and send JSON data
- Activity: Create a mini form that sends info to a server (mock API)

Module 7: Error Handling and Debugging AJAX

- Common AJAX errors and how to fix them
- Real-life example: Handling a failed payment request smartly
- How to check status codes (404, 500, etc.)
- Using `.catch()` to handle problems in Fetch API
- Activity: Simulate an AJAX error and catch it

Module 8: Final Project – Create a Dynamic Webpage Using AJAX

- Combine loading and submitting data using AJAX
- Real-life example: Building a live news feed
- Best practices for writing clean, error-free AJAX code
- Activity: Build a small live data project and present it

Bonus Materials

- AJAX cheat sheet with methods and status codes
- List of free public APIs to practice AJAX
- Common mistakes and troubleshooting guide
- Mini-challenges: Create a weather app using AJAX
- Certificate of Completion for AJAX Basics