Introduction And Instructions

I**ntroduction to GitHub, Testing, and the DOM**, you will learn about GitHub workflows, which will allow you to collaborate on code from public repositories. You will get started with unit testing and the test-driven development process in order to validate that your code functions as intended. Finally, you will work with the Document Object Model to ensure that JavaScript and HTML interact with the browser to make your web page functional.

A Note On Coding

Don't forget! Coding activities in this program are intended to be challenging. Instructions are in each activity, but often, in order to be successful, you must incorporate information that is discussed in the videos or was included in prior activities.

You will be expected to analyze and synthesize information on your own. Coding can be complex and each tiny step will not necessarily be included in the instructions. This is by design so that you become increasingly independent.

It is not unusual for learners to make several attempts before getting the code just right. If you've made several attempts and feel frustrated, you may access the solution set at any time. After viewing the solution set, attempt the activity again. If any part of the activity is still unclear, please bring your question to office hours and ask your Learning Facilitator for help!

Learning Outcomes

Course Learning Outcomes Addressed

- Explain the key web programming concepts
- Build web applications using JavaScript, HTML, and CSS
- Design and code user interactions on web pages
- Define and break down modern software development life cycle processes
- Set up code management tools, such as GitHub

By the end of this week, you will be able to:

1. Construct tests that validate the functionality of your code
2. List the steps of the test-driven development process
3. Explain the test-driven development methodology and process
4. Interpret unit tests and assess desired outcomes
5. Write unit tests
6. Manage code by using GitHub
7. Explain how HTML pages interpret a JavaScript code
8. Explain how a browser interprets HTML and JavaScript code
9. Use JavaScript to dynamically display data on a web page

Activities

Key Activities

- Knowledge Checks 7.1, 7.2, and 7.3
- Discussions
    - Thinking Through a Unit Test
    - When Should You Use Fetch?
    - Explaining the DOM
- Coding Activities
    - DOM Manipulation Activity
    - Insert into the DOM Activity
    - Unit Testing Exercise
- Coding Assignments
    - PacMen Factory Assignment

Self-Study Activities

- Hello World Exercise
- MIT Facts Exercise
- Inject JavaScript into HTML Exercise
- Inject Posts into Div Exercise
- PacMen Exercise

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You may download the starter files for the self-study activities here download.

You may access video transcripts, summary sheets, and additional resources here.

Support

Q&A Discussion Board

If you have questions about this week's assignments or content, you can post them on the Q&A Discussion Board, which will be monitored by your Learning Facilitator. In this forum, you can also interact with fellow classmates and help each other. If you do not get sufficient clarification here, please bring the question to your Learning Facilitator's office hours.

Need help? Contact Program Support

For assistance, select **Support** in the course menu. The Help Center has answers to the most common queries we receive. For further assistance, select **Submit a**

Request at the top of the Help Center page and complete the form. You will receive a prompt response.