

Manipulating the DOM

Objective:

Use JavaScript to manipulate the DOM by selecting HTML elements, updating content dynamically, and responding to user events.

Scenario:

You are tasked with creating a Quote of the Day feature for a personal website. Every time the user clicks a button, a new quote will be displayed on the page. This feature should dynamically update the content of a `<p>` element with each new quote.

Step 1: Set Up Your Environment

- Use the Visual Studio Code console application you created at the start of the course. Remove any existing code in the Program.cs file of your console application.
- Copy and edit the code in this activity into the Program.cs file to complete the steps.

Step 2: HTML Setup

Create a simple HTML structure with a heading, a paragraph, and a button.

HTML Template:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Quote of the Day</title>
</head>
<body>
  <h1 id="quoteHeader">Quote of the Day</h1>
  <p id="quoteDisplay">Click the button to see today's quote!</p>
  <button id="newQuoteButton">Get New Quote</button>
  <script src="script.js"></script>
</body>
</html>
```

Step 3: JavaScript Setup

1. Select HTML Elements: Use `getElementById` to select the button and paragraph elements.
2. Create an Array of Quotes: Define at least three quotes in an array.

3. Add an Event Listener: Add an event listener to the button to display a new quote each time the button is clicked.

HTML:

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Quote of the Day</title>
</head>

<body>
  <h1 id="quoteHeader">Quote of the Day</h1>
  <p id="quoteDisplay">Click the button to see today's quote!</p>
  <button id="newQuoteButton">Get New Quote</button>

  <script src="script.js"></script>
</body>

</html>
```

JavaScript:

```
// Select HTML Elements
const quoteDisplay = document.getElementById("quoteDisplay");
const newQuoteButton = document.getElementById("newQuoteButton");

// Create an Array of Quotes
const quotes = [
  "The only limit to our realization of tomorrow is our doubts of today. - Franklin D. Roosevelt",
  "In the middle of every difficulty lies opportunity. - Albert Einstein",
  "Success usually comes to those who are too busy to be looking for it. - Henry David Thoreau"
];

// Add an Event Listener
newQuoteButton.addEventListener("click", () => {
  const randomIndex = Math.floor(Math.random() * quotes.length);
  quoteDisplay.textContent = quotes[randomIndex];
});
```