

Exercise: Build a Pop-up Modal with HTML, CSS, and JavaScript

Objective: To build a pop-up modal which is a child window that pops up over the top of the main window. When the modal is active, the main window is inactive and cannot be interacted with. The modal should have a dynamic title based on user input, and should close when the user clicks outside the modal. Add animation as a bonus challenge.

Part 1: HTML Structure

Provide the students with the following HTML to start off:

```
<!DOCTYPE html>
<html>
<head>
  <title>Modal Exercise</title>
  <link rel="stylesheet" type="text/css" href="styles.css">
</head>
<body>
  <button id="openBtn">Open Modal</button>

  <div id="modal" class="modal">
    <div class="modal-content">
      <span id="closeBtn" class="close">&times;</span>
      <h2 id="modalTitle">Dynamic Title</h2>
      <p>This is a modal window.</p>
    </div>
  </div>

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

Part 2: CSS Styling

Provide the students with the following CSS to start off:

```
.modal {  
  display: none;  
  position: fixed;  
  z-index: 1;  
  padding-top: 100px;  
  left: 0;  
  top: 0;  
  width: 100%;  
  height: 100%;  
  overflow: auto;  
  background-color: rgba(0,0,0,0.4);  
}
```

```
.modal-content {  
  position: relative;  
  margin: auto;  
  padding: 20px;  
  width: 80%;  
  max-width: 500px;  
  background-color: #fefefe;  
  border: 1px solid #888;  
  border-radius: 5px;  
  box-shadow: 0 4px 8px 0 rgba(0,0,0,0.2), 0 6px 20px 0 rgba(0,0,0,0.19);  
}
```

```
.close {  
  color: #aaa;  
  float: right;  
  font-size: 28px;  
  font-weight: bold;  
  cursor: pointer;  
}
```

```
.close:hover,  
.close:focus {  
  color: black;  
  text-decoration: none;  
  cursor: pointer;  
}
```

Part 3: JavaScript Interaction

3.1 - Modal Opening

Challenge 1: Create a JavaScript function to open the modal when the user clicks on the "Open Modal" button.

3.2 - Modal Closing

Challenge 2: Create a JavaScript function to close the modal when the user clicks on the "x" (Close) button.

Challenge 3: Extend the modal closing function to also close the modal when the user clicks anywhere outside the modal.

3.3 - Dynamic Title

Challenge 4: Ask the user for input to use as the title of the modal. Use this input to dynamically change the title of the modal every time it opens.

3.4 - Animation (Bonus Challenge)

Challenge 5: Create an animation function in JavaScript to animate the modal when it opens. The modal should start from the top of the page and gradually slide down to its final position. Additionally, it should fade in from transparent to fully opaque. This should happen each time the modal is opened.