**Assignment: Colour Changer App**

In this assignment, you’ll create a simple web app that changes the background colour of a webpage to a random colour when a button is clicked. You’ll use HTML for the button, CSS for basic styling, and JavaScript to generate random colours and update the background. This task helps you practice integrating HTML, CSS, and JavaScript, handling events, and manipulating the DOM.

**Objectives**

* Learn to create an interactive webpage with HTML, CSS, and JavaScript.
* Practice handling clicks events with JavaScript.
* Use the DOM to dynamically change the page’s background color.
* Generate random values for RGB colours.

**Task**

Write an HTML file that includes:

1. A button element with text like “Change Colour”.
2. Basic CSS to style the button (e.g., size, colour, or hover effect).
3. JavaScript code that:
   * Listens for a click event on the button.
   * Generates a random RGB colour (e.g., rgb(123, 45, 200)).
   * Changes the page’s background colour to the random colour.
4. Tests the app by clicking the button multiple times to verify random colour changes.
5. Includes clear comments in the JavaScript, with one explaining how the random colour is generated or applied (e.g., RGB string creation or DOM manipulation).

**Output Example**

* A webpage with a styled button.
* Clicking the button changes the page’s background to a random colour (e.g., red, blue, green, purple, etc.).
* Each click generates a new random colour.

**Questions**

1. Explain the difference between addEventListener and onclick for handling events in JavaScript.
2. What happens if you generate invalid RGB values (e.g., numbers outside 0–255)? Provide an example of how to prevent this.
3. How could you modify the app to allow users to input a specific colour (e.g., using an <input type="color">) instead of random colours?

**Submission Instructions**

* Save your code as colorChanger.html and your answers to the questions in a file named answers.txt.
* Email your submissions to [tech@skillyards.com](mailto:tech@skillyards.com) by default deadline: 25-06-2025 11PM.
* Upload your code to the GitHub repository: <https://github.com/Skill-yards/Assignment-Submission.git>
* Ensure your code runs without errors in a browser.

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