

ASSIGNMENT 7

Instructions for Students

- Create a separate HTML and CSS file for each question.
- Do not use JavaScript or any external frameworks.
- Use semantic HTML5 tags (header, main, section, footer, etc.).
- Use Flexbox or Grid for layouts where needed.
- Keep HTML and CSS well-indented and include comments to explain key rules.
- Maintain good contrast, clean spacing, and readable typography.

1. Create a Borders and Padding Demonstration Page

Requirements:

- Display multiple boxes showing different border styles (solid, dashed, double, groove).
- Add examples of rounded corners using border-radius.
- Use different padding values to demonstrate internal spacing.
- Align boxes horizontally using Flexbox.
- Apply a hover effect that changes the border color with a smooth transition.

2. Design a Height and Width Practice Layout

Requirements:

- Include three boxes of varying heights and widths using units like px, %, vh, and em.
- Demonstrate the use of min-height, max-width, and overflow properties.
- Center all boxes vertically and horizontally using Flexbox alignment.
- Apply distinct background colors to visualize size differences.

3. Create a Gradient Background Webpage

Requirements:

- Include two main sections: one using a linear gradient background

and one using a radial gradient background.

- Add text in each section describing its gradient type.
- Keep a fixed header and footer for a complete layout.
- Use background-attachment: fixed; for one section to create a parallax-like effect.

4. Design a Shadows and Depth Effect Layout

Requirements:

- Create three profile or content cards with different box-shadow styles.
- Add text-shadow to headings for depth.
- On hover, each card should lift up using a larger shadow.
- Use CSS transitions for smooth animation.
- Arrange the cards in a single row using Flexbox or Grid.

5. Create a Webpage Demonstrating Advanced CSS Selectors

Requirements:

- Build a list of items and apply attribute selectors (`[type="text"]`, `[href^="https"]`).
- Demonstrate pseudo-classes (`:hover`, `:focus`, `:nth-child()`) and pseudo-elements (`::before`, `::after`).
- Use combinators (`>`, `+`, `~`, and descendant) for selective styling.
- Add comments in CSS explaining each selector type.

6. Design a CSS Transformations Showcase

Requirements:

- Create four boxes to demonstrate `rotate()`, `scale()`, `translate()`, and `skew()` transformations.
- Each transformation should activate on hover using `transition: all 0.4s ease;`.
- Arrange boxes horizontally using Flexbox.
- Add labels under each box describing the applied transformation.

7. Create a Typography and Text Styling Page

Requirements:

- Write a short article demonstrating different font families, weights, and sizes.
- Use line-height, letter-spacing, and text-align for readability.
- Style `<mark>`, ``, and `` elements with custom colors.
- Use `::first-letter` and `::first-line` pseudo-elements for emphasis.
- Ensure the text is clear and visually balanced.

8. Build a Box Model Exploration Page

Requirements:

- Visually represent the content, padding, border, and margin layers.
- Use background colors and outlines to differentiate each layer.
- Demonstrate the difference between default and box-sizing:
`border-box`;
- Center the demonstration using Flexbox.
- Include short descriptive text for each part of the box model.

9. Design an Outline and Focus Styling Form

Requirements:

- Create a small form with input and textarea elements.
- Demonstrate various outline styles and `outline-offset`.
- Change outline color on focus using the `:focus` selector.
- Add padding, border-radius, and subtle shadows for neat appearance.
- Ensure uniform spacing between form elements.

10. Create a Navigation Bar with Transitions and Hover Effects

Requirements:

- Build a horizontal navigation bar with five links.
- Add padding, borders, and smooth hover transitions (`transition: all 0.3s ease;`).
- Highlight the active link with a distinct background or underline.
- Make the navbar responsive—stack vertically below 700px.
- Include a footer section with simple centered text.