

The background is a dark blue gradient. Overlaid on this is a complex network of white dots of varying sizes, connected by thin white lines. The dots and lines are more concentrated on the right side of the image, creating a sense of depth and connectivity. The overall aesthetic is modern and technological.

Welcome to the Apprenticeship Program – Session 16

Agenda

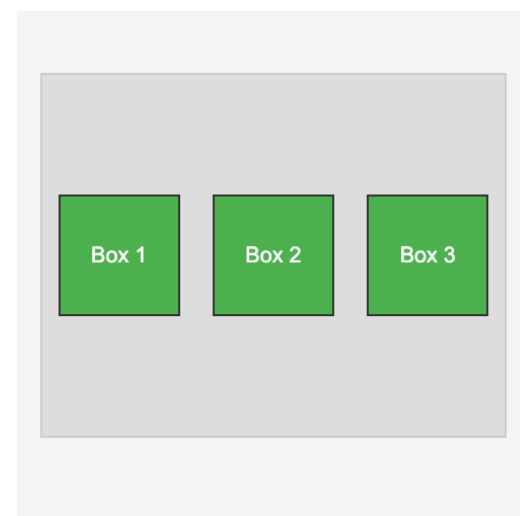
- Wireframing and Layout Planning.
- Flexbox Fundamentals.
- Flexbox Alignment.
- CSS Reset.



Introduction to Flexbox & CSS Reset



- Learn how to plan layouts using wireframes.
- Build responsive layouts with Flexbox.
- Use CSS reset stylesheets for consistency.



Wireframing and Layout Planning

- **Definition:** Wireframing helps visually design website structures before coding.
- **Tools:** Microsoft Excel / Google Sheets (simple grid-based planning).
- **Helps organize headers, content sections, and footers.**
- **Example:** Plan a 3x3 grid for website layout.

DEMO

| Logo | Home | Services | About | Contact | Search |
|--|------|--------------------------------------|-------|--|--------|
| <div>banner image</div> | | | | | |
| <div>Service 1</div> <div>MORE</div> | | <div>Service 1</div> <div>MORE</div> | | <div>Service 1</div> <div>MORE</div> | |
| <div>Latest News</div> <div>MORE</div> | | | | <div> <div>Name: <input type="text"/></div> <div>Phone: <input type="text"/></div> <div>Email: <input type="text"/></div> <div>GET IN TOUCH</div> </div> | |

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Flexbox Basics

- **Definition:** Flexbox is a CSS layout tool for responsive designs.
- It allows you to align elements dynamically across different screen sizes.
- **Example:** Items inside `.container` align dynamically. They now follow Flexbox rules for alignment and positioning.

```
.container {  
  display: flex;  
}
```

Flex-Direction

- Controls the direction of items in a flex container.
 - row (default) → Horizontal layout.
 - column → Vertical layout.
 - row-reverse → Reverses items horizontally.
 - column-reverse → Reverses items vertically.

```
.container {  
  display: flex;  
  flex-direction: column;  
}
```

```
.container {  
  flex-direction: row;  
}
```

Flex-Wrap

- By default, Flexbox tries to fit items on a single line.
- Controls whether flex items wrap to a new line.
 - nowrap → Items stay on one line.
 - wrap → Items wrap if they overflow.
 - wrap-reverse → Items wrap in reverse order.

```
.container {  
  display: flex;  
  flex-wrap: wrap;  
}
```

DEMO

Flexbox Alignment - Main Axis

- **justify-content** aligns flex items along the main axis (horizontal if flex-direction: row, vertical if flex-direction: column).
 - **flex-start** → Aligns to start.
 - **center** → Centers items.
 - **space-between** → Equal spacing between items.
 - **space-around** → Equal spacing around items.

```
.container {  
  display: flex;  
  justify-content: center;  
}
```


Flexbox Alignment - Cross Axis

- **align-items** aligns items along the cross axis (perpendicular to the main axis).
 - **flex-start** → Aligns items at the top.
 - **center** → Aligns items vertically.
 - **stretch** → Stretches items to fit the container.

Tip: Understanding the axes helps you control alignment using justify-content (main axis) and align-items (cross axis).

```
.container {  
  display: flex;  
  align-items: center;  
}
```

DEMO

CSS Reset - Why It Matters

- **Definition:** Removes inconsistent default browser styles.
- **Purpose:**
 - Standardizes styling across browsers.
 - Prevents unintended design quirks.
- Different browsers have their own default styles for elements (e.g., margins, padding).
- A reset stylesheet creates a clean slate, avoiding unintended design quirks.

```
/* CSS Reset */  
  
/* Remove default margin and padding */  
* {  
    margin: 0;  
    padding: 0;  
    box-sizing: border-box;  
}  
  
/* Set default font size and line height */  
html {  
    font-size: 100%;  
    /* Default font size of 16px */  
    line-height: 1.5;  
}
```

How to Implement CSS Reset

- Popular resets:

- Normalize.css
- Eric Meyer's Reset CSS

- **Usage:** Add the reset stylesheet at the beginning of your CSS file or often a separate CSS file.

CSS

```
/* Include reset before your styles */  
@import url("normalize.css");
```

DEMO

Conclusion and Q&A

■ Key Takeaways:

- ☒ Wireframing helps plan layouts visually.
- ☒ Flexbox makes responsive layouts easy.
- ☒ CSS reset prevents inconsistent browser styles.



- **Wireframe Beginner's Guide:** <https://blog.hubspot.com/website/website-wireframe>
- **CSS Tricks:** <https://css-tricks.com/snippets/css/a-guide-to-flexbox/>