

Lesson:

Introduction to Flexbox



Topics Covered

- What is Flexbox
- Understanding the two main axes of flexbox (main axis and cross axis)
- Importance of Flexbox in CSS

What is Flexbox

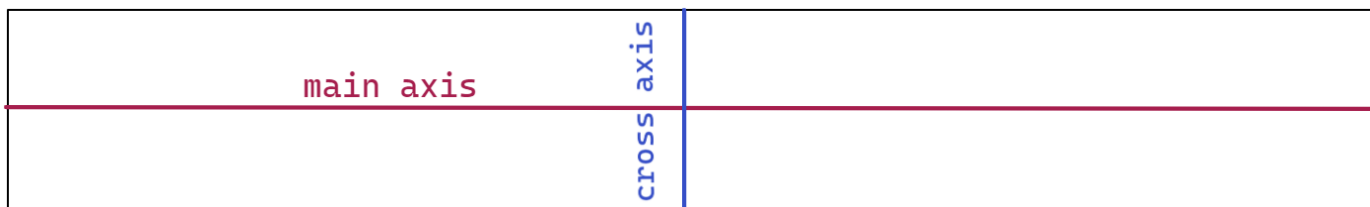
The Flexbox or just 'flexible Box module, for short, is a box model designed for user interfaces, and it allows users to align and distribute space among items in a container such that elements behave predictably when the page layout must accommodate different, unknown screen sizes. A flex container expands items to fill available space and shrinks them to prevent overflow.

The flexbox can be used by setting the display property to flex i.e. **display: flex**

Understanding the two axis of flexbox (main axis and cross axis)

Flexbox was the first CSS layout method that worked in a completely different way than normal CSS. Instead of worrying about block/inline elements flexbox worries about a main axis and a cross axis.

By default the main axis (shown in green) goes horizontally across the container and the cross axis goes vertically. This means that any layout method that deals with the main axis will layout elements horizontally while the cross axis will layout elements vertically.



Main axis

In Flexbox, the main axis is the primary axis along which flex items are laid out. The direction of the main axis is defined by the flex-direction property.

Example – If **flex-direction: row;** is set, the main axis is horizontal and flex items are laid out from left to right. Conversely, if the **flex-direction: column;** is set, the main axis is vertical and flex items are laid out from top to bottom.

Cross axis

In Flexbox, the cross axis is the perpendicular axis to the main axis. It runs perpendicular to the flex-direction property and determines the alignment of flex items along the secondary axis.

Example – if **flex-direction: row;** is set, the cross axis is vertical and flex items are positioned along the vertical axis. Conversely, if **flex-direction: column;** is set, the cross axis is horizontal and flex items are positioned along the horizontal axis.

Importance of Flexbox in CSS

Flexbox is a layout module in CSS that provides a flexible way to arrange, align, and distribute content within a container. It has become a popular way to create responsive and dynamic web layouts because of its many benefits.

Some of the key benefits of using Flexbox in CSS include:

1. **Simplifies layout:** Flexbox simplifies the process of creating complex layouts, allowing designers and developers to arrange content in a way that was previously difficult or even impossible with CSS alone.
2. **Responsive design:** Flexbox allows for responsive design by enabling designers to create layouts that automatically adjust to different screen sizes and devices without needing to use media queries or other hacks.
3. **Control over alignment:** Flexbox provides granular control over the alignment of content within a container. Designers can align items horizontally, vertically, or both, and can also control the spacing between items.
4. **Easy to use:** The syntax for Flexbox is simple and intuitive, making it easy for designers and developers to learn and use.
5. **Cross-browser support:** Flexbox is supported by all modern web browsers, including Internet Explorer 11 and later.