# Lab: Flexbox Deep Dive

## Learning Objectives

**By the end of this lab, students will:**

* Understand how Flexbox aligns, distributes, and wraps items.
* Use justify-content, align-items, and flex-wrap effectively.
* Control item size and growth with flex shorthand.
* Reorder items and explore responsiveness.

## Setup

Students will work in a single HTML file and **experiment by editing CSS values**.  
The page has 4 interactive Flexbox sections, each focusing on one concept.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Flexbox Deep Dive</title>

<style>

body {

font-family: Arial, sans-serif;

margin: 0;

padding: 20px;

background: #ecf0f1;

color: #2c3e50;

}

h1, h2 {

text-align: center;

color: #2c3e50;

}

section {

background: white;

padding: 20px;

border-radius: 8px;

margin-bottom: 30px;

box-shadow: 0 2px 5px rgba(0,0,0,0.1);

}

/\* Flex container base style \*/

.container {

display: flex;

background: #dfe6e9;

padding: 10px;

border-radius: 6px;

min-height: 120px;

}

.item {

background: #0984e3;

color: white;

padding: 20px;

text-align: center;

border-radius: 4px;

flex: 0 1 100px; /\* default width 100px \*/

font-weight: bold;

}

</style>

</head>

<body>

<h1>💪 Flexbox Deep Dive Lab</h1>

<!-- 1️⃣ Justify Content -->

<section>

<h2>1. Justify Content</h2>

<p>

Try changing <code>justify-content</code> to:

<strong>flex-start</strong> | <strong>center</strong> | <strong>space-between</strong> | <strong>space-around</strong> | <strong>space-evenly</strong>

</p>

<div class="container" style="justify-content: space-around;">

<div class="item">1</div>

<div class="item">2</div>

<div class="item">3</div>

</div>

</section>

<!-- 2️⃣ Align Items -->

<section>

<h2>2. Align Items</h2>

<p>

Try changing <code>align-items</code> to:

<strong>flex-start</strong> | <strong>center</strong> | <strong>flex-end</strong> | <strong>stretch</strong>

</p>

<div class="container" style="align-items: flex-end; height: 200px;">

<div class="item" style="height: 50px;">A</div>

<div class="item" style="height: 100px;">B</div>

<div class="item" style="height: 150px;">C</div>

</div>

</section>

<!-- 3️⃣ Flex Grow, Shrink, Basis -->

<section>

<h2>3. Flex Grow, Shrink, and Basis</h2>

<p>

Each item uses <code>flex: grow shrink basis</code>.

Try <code>flex: 1</code> or <code>flex: 2</code> to see how they expand.

</p>

<div class="container">

<div class="item" style="flex: 1;">1</div>

<div class="item" style="flex: 2;">2</div>

<div class="item" style="flex: 1;">3</div>

</div>

</section>

<!-- 4️⃣ Flex Wrap and Order -->

<section>

<h2>4. Flex Wrap and Order</h2>

<p>

Try resizing the browser. The container uses <code>flex-wrap: wrap</code>.

One item has <code>order: -1</code>, moving it to the start.

</p>

<div class="container" style="flex-wrap: wrap; gap: 10px;">

<div class="item" style="order: -1;">Moved First</div>

<div class="item">2</div>

<div class="item">3</div>

<div class="item">4</div>

<div class="item">5</div>

<div class="item">6</div>

</div>

</section>

</body>

</html>