🧑‍💻 Day 5 Lab Sheet – Flexbox, Grid & Responsive Design

Objective

By the end of this lab, you will:

- Use **Flexbox** for one-dimensional layouts
- Use **CSS Grid** for two-dimensional layouts
- Apply **media queries** for responsive design
- Build a simple responsive portfolio page

Task 1: Flexbox Basics

1. Create a file named day5_flexbox.html.
2. Add the following HTML:

```
<!DOCTYPE html>
<html>
<head>
 <title>Flexbox Example</title>
 <link rel="stylesheet" href="style.css">
</head>
<body>
 <div class="container">
  <div class="item">Box 1</div>
  <div class="item">Box 2</div>
  <div class="item">Box 3</div>
 </div>
</body>
</html>
```

3. In style.css:

```
.container {
 display: flex;
 justify-content: space-between;
 align-items: center;
 background: lightgray;
```

```css
  padding: 20px;

}


.item {

  background: lightblue;

  padding: 20px;

  margin: 10px;

}
```

✅ Boxes should align in a row with equal spacing.

Task 2: Responsive Navbar with Flexbox

1.   Add this HTML:

```html
<nav class="navbar">

 <div>Logo</div>

 <div>Home</div>

 <div>About</div>

 <div>Contact</div>

</nav>
```

2.   In style.css:

```css
.navbar {

 display: flex;

 justify-content: space-between;

 background: black;

 color: white;

 padding: 10px;

}
```

3.   Add responsiveness:

```css
@media (max-width: 600px) {

 .navbar {

  flex-direction: column;

  text-align: center;
```

```
 }
}
```

✅ Navbar is horizontal on desktop, stacked on mobile.

Task 3: CSS Grid Basics

1. Create day5_grid.html:

```html
<div class="grid-container">
 <div class="grid-item">1</div>
 <div class="grid-item">2</div>
 <div class="grid-item">3</div>
 <div class="grid-item">4</div>
</div>
```

2. In style.css:

```css
.grid-container {
 display: grid;
 grid-template-columns: repeat(2, 1fr);
 gap: 10px;
}


.grid-item {
 background: lightgreen;
 padding: 20px;
 text-align: center;
}
```

✅ Creates a **2-column grid**.

Task 4: Responsive Grid Portfolio

1. Add this HTML:

```html
<div class="portfolio">
 <div class="project">Project 1</div>
 <div class="project">Project 2</div>
```

```html
  <div class="project">Project 3</div>

  <div class="project">Project 4</div>

</div>
```

2. In style.css:

```css
.portfolio {

 display: grid;

 grid-template-columns: repeat(3, 1fr);

 gap: 15px;

}


.project {

 background: lightcoral;

 padding: 30px;

 text-align: center;

}


/* Responsive rule */

@media (max-width: 768px) {

 .portfolio {

  grid-template-columns: 1fr;

 }

}
```

✅ Projects are **3-column on desktop** and **1-column on mobile**.

Task 5: Mini Project – Responsive Portfolio Page

👉 Create a file day5_portfolio.html with:

- **Header + Navbar** (Flexbox)

- **Projects Section** (Grid, responsive)

- **Footer**

✅ Test your page by resizing the browser window.

✅ Deliverables

- day5_flexbox.html + style.css

- day5_grid.html + style.css

- day5_portfolio.html + style.css

Output should demonstrate **Flexbox navbar, Grid layout, and responsive design**.