1. Setting Up Bootstrap 5

Exercise 1.1
Create a basic HTML page and link Bootstrap 5 via CDN:

html

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```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Bootstrap 5 Setup</title>

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

  <h1 class="text-center">Hello Bootstrap</h1>

</body>

</html>
```

Exercise 1.2
Using downloaded files:

- Download from https://getbootstrap.com

- Place bootstrap.min.css, bootstrap.bundle.min.js in your project

- Link in HTML:

html

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```
<link rel="stylesheet" href="css/bootstrap.min.css">

<script src="js/bootstrap.bundle.min.js"></script>
```

---

2. Bootstrap Structure and Files

Exercise 2.1

Explain folder structure:

- **CSS folder**: Contains stylesheets (bootstrap.min.css)

- **JS folder**: JavaScript plugins (bootstrap.bundle.min.js)

- **Icons folder**: Optional, contains SVG or font icons

Exercise 2.2

Include JS plugins:

html

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```
<script src="js/bootstrap.bundle.min.js"></script>
```

---

3. Responsive Grid Layout

Exercise 3.1

html

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```
<div class="container">
  <div class="row">
    <div class="col-12 col-md-6 col-lg-4">Column 1</div>
    <div class="col-12 col-md-6 col-lg-4">Column 2</div>
    <div class="col-12 col-md-6 col-lg-4">Column 3</div>
  </div>
</div>
```

Exercise 3.2

Use .container, .row, .col-* for layout.

---

4. Column Layouts

Exercise 4.1

html

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```html
<div class="container">

  <div class="row">

    <div class="col-md-3">Sidebar</div>

    <div class="col-md-9">Content</div>

  </div>

</div>
```

Exercise 4.2

html

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```html
<div class="row">

  <div class="col-sm-3">1</div>

  <div class="col-sm-3">2</div>

  <div class="col-sm-3">3</div>

  <div class="col-sm-3">4</div>

</div>
```

---

5. Alignment & Reordering

Exercise 5.1

html

CopyEdit

```html
<div class="row justify-content-center align-items-center" style="height: 200px;">

  <div class="col-4">Centered Content</div>

</div>
```

Exercise 5.2

html

CopyEdit

```html
<div class="row">

  <div class="col-md-6 order-md-2">Second</div>
```

```
<div class="col-md-6 order-md-1">First</div>
```

```
</div>
```

---

6. Responsive Flexbox

Exercise 6.1

html

CopyEdit

```html
<nav class="d-flex flex-column flex-md-row">
  <a class="nav-link" href="#">Home</a>
  <a class="nav-link" href="#">About</a>
</nav>
```

Exercise 6.2

html

CopyEdit

```html
<div class="card d-flex justify-content-between align-items-center">
  <div>Left</div>
  <div>Right</div>
</div>
```

---

7. Typography

Exercise 7.1

html

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```html
<h1 class="display-1">Heading</h1>
<p class="lead text-muted fw-bold">Lead paragraph</p>
```

Exercise 7.2

html

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```
<p class="text-uppercase">uppercase</p>

<p class="text-lowercase">LOWERCASE</p>

<p class="text-capitalize">capitalize each word</p>
```

8. Forms

Exercise 8.1

html

CopyEdit

```
<form>

  <input type="text" class="form-control" placeholder="Name">

  <div class="form-check">

    <input type="checkbox" class="form-check-input"> Subscribe

  </div>

</form>
```

Exercise 8.2

html

CopyEdit

```
<div class="form-floating">

  <input type="email" class="form-control" id="email" placeholder="Email">

  <label for="email">Email</label>

</div>
```

9. Buttons

Exercise 9.1

html

CopyEdit

```
<button class="btn btn-primary">Primary</button>

<button class="btn btn-outline-secondary">Outline</button>
```

Exercise 9.2

html

CopyEdit

```html
<div class="btn-group" role="group">
  <input type="checkbox" class="btn-check" id="btncheck1">
  <label class="btn btn-outline-primary" for="btncheck1">Toggle</label>
</div>
```

---

10. Navbars

Exercise 10.1

html

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```html
<nav class="navbar navbar-expand-lg navbar-light bg-light">
  <a class="navbar-brand" href="#">Logo</a>
  <form class="d-flex ms-auto">
    <input class="form-control me-2" type="search" placeholder="Search">
  </form>
</nav>
```

Exercise 10.2

html

CopyEdit

```html
<ul class="nav nav-tabs">
  <li class="nav-item"><a class="nav-link active" href="#">Tab</a></li>
</ul>
```

---

11. Cards & Media

Exercise 11.1

html

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```html
<div class="card">
  <img src="profile.jpg" class="card-img-top" alt="...">
  <div class="card-body">
    <h5 class="card-title">Profile</h5>
  </div>
</div>
```

Exercise 11.2

html

CopyEdit

```html
<div class="media">
  <img src="img.jpg" class="mr-3" alt="..." style="width: 64px;">
  <div class="media-body">Media text</div>
</div>
```

---

12. Spacing Utilities

Exercise 12.1

html

CopyEdit

```html
<div class="m-3 p-2 py-5">Spacing Applied</div>
```

Exercise 12.2
Use spacing classes like mb-4, py-3 to separate pricing cards visually.

---

13. Colors & Backgrounds

Exercise 13.1

html

CopyEdit

```html
<div class="bg-primary text-white p-3">Dashboard Panel</div>
```

Exercise 13.2

html

CopyEdit

```
<div class="bg-dark bg-gradient text-white p-3">Gradient Background</div>
```

---

14. Display & Visibility

Exercise 14.1

html

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```
<div class="d-none d-md-block">Visible on md and larger</div>
```

Exercise 14.2

html

CopyEdit

```
<div class="d-none d-md-block">Sidebar for tablets+</div>
```

---

15. Borders, Shadows, Rounding

Exercise 15.1

html

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```
<img src="avatar.jpg" class="border border-primary border-3 rounded-circle">
```

Exercise 15.2

html

CopyEdit

```
<div class="card shadow-lg rounded-pill">Stylized Card</div>
```

---

16. Positioning

Exercise 16.1

html

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```
<footer class="position-fixed bottom-0 w-100 bg-light">Fixed Footer</footer>
```

Exercise 16.2

html

CopyEdit

```
<div class="position-relative">

  <img src="product.jpg">

  <span class="badge bg-danger position-absolute top-0 start-100 translate-middle">New</span>

</div>
```

---

17. Icons

Exercise 17.1

html

CopyEdit

```
<link href="https://cdn.jsdelivr.net/npm/bootstrap-icons/font/bootstrap-icons.css" rel="stylesheet">

<footer><i class="bi bi-facebook"></i></footer>
```

Exercise 17.2

html

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```
<button class="btn btn-primary"><i class="bi bi-download"></i></button>
```

---

18. JavaScript Plugins

Exercise 18.1

html

CopyEdit

```
<button class="btn btn-primary" data-bs-toggle="modal" data-bs-target="#myModal">Open Modal</button>
```

```html
<div class="modal fade" id="myModal">...</div>
```

Exercise 18.2

html

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```html
<div class="accordion" id="accordionExample">

  <div class="accordion-item">

    <h2 class="accordion-header"><button class="accordion-button" data-bs-toggle="collapse" data-bs-target="#collapseOne">Accordion</button></h2>

    <div id="collapseOne" class="accordion-collapse collapse show">Content</div>

  </div>

</div>
```

---

19. Customization with Sass

Exercise 19.1

bash

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npm install bootstrap

Use @import "bootstrap/scss/bootstrap"; in your custom Sass.

Exercise 19.2
Edit _variables.scss:

scss

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$primary: #ff5722;

$border-radius: 1rem;

Recompile using:

bash

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npm run build