**1.Setting up bootstrap 5**

Exercise1.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap 5 CDN</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<h1 class="text-center mt-5">Bootstrap 5 CDN Setup</h1>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>

</body>

</html>

Exercise 1.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap Local</title>

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

</head>

<body>

<h1 class="text-center mt-5">Bootstrap 5 Local Files</h1>

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

</body>

</html>

**2.Bootstrap Structure and Files**

Exercise 2.1:

bootstrap/

├── css/

│ └── bootstrap.min.css

├── js/

│ └── bootstrap.bundle.min.js

└── icons/

└── (optional, if using Bootstrap Icons)

Exercise 2.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap JS Plugins</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container text-center mt-5">

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

</div>

<div class="modal fade" id="exampleModal" tabindex="-1">

<div class="modal-dialog">

<div class="modal-content">

<div class="modal-header">

<h5 class="modal-title">Modal Title</h5>

<button type="button" class="btn-close" data-bs-dismiss="modal"></button>

</div>

<div class="modal-body">This is a modal.</div>

<div class="modal-footer">

<button class="btn btn-secondary" data-bs-dismiss="modal">Close</button>

</div>

</div>

</div>

</div>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>

</body>

</html>

**3. Fundamentals of Responsive Grid Layout**

Exercise 3.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Responsive Grid</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-4">

<div class="row">

<div class="col-12 col-md-6 col-lg-4 bg-primary text-white p-3">Column 1</div>

<div class="col-12 col-md-6 col-lg-4 bg-secondary text-white p-3">Column 2</div>

<div class="col-12 col-md-6 col-lg-4 bg-success text-white p-3">Column 3</div>

</div>

</div>

</body>

</html>

Exercise 3.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Grid Structure</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-4">

<div class="row">

<div class="col-sm-4 bg-warning p-3">Column A</div>

<div class="col-sm-4 bg-info p-3">Column B</div>

<div class="col-sm-4 bg-danger p-3">Column C</div>

</div>

</div>

</body>

</html>

**4. Column Layouts and Grid Classes**

Exercise 4.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Sidebar Layout</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-4">

<div class="row">

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

<div class="col-md-9 bg-white p-3">Main Content</div>

</div>

</div>

</body>

</html>

Exercise 4.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Four Columns</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-4">

<div class="row">

<div class="col-sm-3 bg-primary text-white p-2">1</div>

<div class="col-sm-3 bg-secondary text-white p-2">2</div>

<div class="col-sm-3 bg-success text-white p-2">3</div>

<div class="col-sm-3 bg-danger text-white p-2">4</div>

</div>

</div>

</body>

</html>

**5. Alignment and Reordering in Grid**

Exercise 5.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Centered Content</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

<style>

.height-200 {

height: 200px;

}

</style>

</head>

<body>

<div class="container mt-4">

<div class="row justify-content-center align-items-center height-200 bg-light">

<div class="col-6 text-center">

<p class="fs-4">Centered Content</p>

</div>

</div>

</div>

</body>

</html>

Exercise 5.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Column Reordering</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-4">

<div class="row">

<div class="col-md-6 order-md-2 bg-success text-white p-3">Second on desktop</div>

<div class="col-md-6 order-md-1 bg-primary text-white p-3">First on desktop</div>

</div>

</div>

</body>

</html>

**6. Responsive Flexbox Utilities**

Exercise 6.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Responsive Flex Navbar</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<nav class="d-flex flex-column flex-md-row justify-content-between align-items-center p-3 bg-dark text-white">

<div class="p-2">Logo</div>

<div class="p-2">Home</div>

<div class="p-2">About</div>

<div class="p-2">Contact</div>

</nav>

</body>

</html>

Exercise 6.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Card Flex Layout</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-4">

<div class="card p-3">

<div class="d-flex justify-content-between align-items-center">

<div>

<h5 class="card-title">Card Title</h5>

<p class="card-text">This is a card with flex layout.</p>

</div>

<button class="btn btn-primary">Action</button>

</div>

</div>

</div>

</body>

</html>

**7. Typography**

Exercise 7.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Typography Utilities</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<h1 class="display-1">Display 1 Heading</h1>

<p class="lead">This is a lead paragraph with emphasis.</p>

<p class="text-muted">This text is muted.</p>

<p class="fw-bold">This text is bold.</p>

<p class="fst-italic">This text is italic.</p>

</div>

</body>

</html>

Exercise 7.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Text Transformations</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<p class="text-uppercase">this text will be uppercase</p>

<p class="text-lowercase">THIS TEXT WILL BE LOWERCASE</p>

<p class="text-capitalize">this text will be capitalized</p>

</div>

</body>

</html>

**8.Forms**

Exercise 8.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Registration Form</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<h2>Registration Form</h2>

<form>

<div class="mb-3">

<label for="name" class="form-label">Full Name</label>

<input type="text" class="form-control" id="name">

</div>

<div class="mb-3">

<label for="email" class="form-label">Email address</label>

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

</div>

<div class="mb-3">

<label class="form-label">Username</label>

<div class="input-group">

<span class="input-group-text">@</span>

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

</div>

</div>

<div class="mb-3 form-check">

<input type="checkbox" class="form-check-input" id="terms">

<label class="form-check-label" for="terms">I agree to the terms</label>

</div>

<button type="submit" class="btn btn-primary">Register</button>

</form>

</div>

</body>

</html>

Exercise 8.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Floating Login Form</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5" style="max-width: 400px;">

<h2 class="mb-4">Login</h2>

<form>

<div class="form-floating mb-3">

<input type="email" class="form-control" id="floatingEmail" placeholder="name@example.com">

<label for="floatingEmail">Email address</label>

</div>

<div class="form-floating mb-3">

<input type="password" class="form-control" id="floatingPassword" placeholder="Password">

<label for="floatingPassword">Password</label>

</div>

<button type="submit" class="btn btn-primary w-100">Login</button>

</form>

</div>

</body>

</html>

**9.Buttons**

Exercise 9.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap Buttons</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<h2>Contextual Buttons</h2>

<div class="mb-3">

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

<button class="btn btn-secondary">Secondary</button>

<button class="btn btn-success">Success</button>

<button class="btn btn-danger">Danger</button>

<button class="btn btn-warning">Warning</button>

<button class="btn btn-info">Info</button>

<button class="btn btn-light">Light</button>

<button class="btn btn-dark">Dark</button>

</div>

<h2>Outline Buttons</h2>

<div>

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

<button class="btn btn-outline-secondary">Secondary</button>

<button class="btn btn-outline-success">Success</button>

<button class="btn btn-outline-danger">Danger</button>

<button class="btn btn-outline-warning">Warning</button>

<button class="btn btn-outline-info">Info</button>

<button class="btn btn-outline-light">Light</button>

<button class="btn btn-outline-dark">Dark</button>

</div>

</div>

</body>

</html>

Exercise 9.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Button Groups and Toggles</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<h2>Button Group</h2>

<div class="btn-group" role="group" aria-label="Basic example">

<button type="button" class="btn btn-primary">Left</button>

<button type="button" class="btn btn-primary">Middle</button>

<button type="button" class="btn btn-primary">Right</button>

</div>

<h2 class="mt-4">Toggle Buttons</h2>

<div class="btn-group" role="group" aria-label="Toggle buttons">

<input type="checkbox" class="btn-check" id="btncheck1" autocomplete="off">

<label class="btn btn-outline-primary" for="btncheck1">Option 1</label>

<input type="checkbox" class="btn-check" id="btncheck2" autocomplete="off">

<label class="btn btn-outline-primary" for="btncheck2">Option 2</label>

<input type="checkbox" class="btn-check" id="btncheck3" autocomplete="off">

<label class="btn btn-outline-primary" for="btncheck3">Option 3</label>

</div>

</div>

</body>

</html>

**10. Navbars and Navigation**

Exercise 10.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Responsive Navbar</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">Logo</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNav">

<ul class="navbar-nav me-auto mb-2 mb-lg-0">

<li class="nav-item"><a class="nav-link active" href="#">Home</a></li>

<li class="nav-item"><a class="nav-link" href="#">About</a></li>

<li class="nav-item"><a class="nav-link" href="#">Contact</a></li>

</ul>

<form class="d-flex" role="search">

<input class="form-control me-2" type="search" placeholder="Search">

<button class="btn btn-outline-light" type="submit">Search</button>

</form>

</div>

</div>

</nav>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>

</body>

</html>

Exercise 10.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Navigation Tabs and Pills</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<h3>Navigation Tabs</h3>

<ul class="nav nav-tabs">

<li class="nav-item"><a class="nav-link active" href="#">Home</a></li>

<li class="nav-item"><a class="nav-link" href="#">Profile</a></li>

<li class="nav-item"><a class="nav-link" href="#">Messages</a></li>

</ul>

<h3 class="mt-4">Navigation Pills</h3>

<ul class="nav nav-pills">

<li class="nav-item"><a class="nav-link active" href="#">Home</a></li>

<li class="nav-item"><a class="nav-link" href="#">Profile</a></li>

<li class="nav-item"><a class="nav-link" href="#">Messages</a></li>

</ul>

</div>

</body>

</html>

**11. Cards and Media Objects**

Exercise 11.1:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Profile Card</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5" style="max-width: 300px;">

<div class="card">

<img src="https://via.placeholder.com/300x200" class="card-img-top" alt="Profile">

<div class="card-body">

<h5 class="card-title">John Doe</h5>

<p class="card-text">Web Developer at Example Corp</p>

<a href="#" class="btn btn-primary">View Profile</a>

</div>

</div>

</div>

</body>

</html>

Exercise 11.2:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Media Object</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<div class="d-flex">

<img src="https://via.placeholder.com/100" class="me-3 rounded" alt="Media">

<div>

<h5>Media Heading</h5>

<p>This is an example of a media object layout using Bootstrap 5 Flexbox utilities.</p>

</div>

</div>

</div>

</body>

</html>

**12. Spacing Utilities**

Exercise 12.1:

<div class="m-3 mt-4 p-2 py-5 bg-light">

Spacing Example

</div>

Exercise 12.2:

<div class="container my-5">

<div class="row">

<div class="col-md-4 px-3 pb-3">

<div class="card p-4">

<h5 class="card-title">Basic Plan</h5>

<p class="card-text">$10/month</p>

</div>

</div>

<div class="col-md-4 px-3 pb-3">

<div class="card p-4">

<h5 class="card-title">Standard Plan</h5>

<p class="card-text">$20/month</p>

</div>

</div>

<div class="col-md-4 px-3 pb-3">

<div class="card p-4">

<h5 class="card-title">Premium Plan</h5>

<p class="card-text">$30/month</p>

</div>

</div>

</div>

</div>

**13. Colors and Backgrounds**

Exercise 13.1:

<div class="container">

<div class="bg-primary text-white p-3 mb-2">Primary Section</div>

<div class="bg-warning text-dark p-3 mb-2">Warning Section</div>

<div class="bg-success text-white p-3 mb-2">Success Section</div>

</div>

Exercise 13.2:

<div class="bg-gradient bg-dark text-white p-4">

Gradient Dark Background with White Text

</div>

**14. Display and Visibility**

Exercise 14.1:

<div class="d-none d-md-block">

Visible on md and larger screens

</div>

<div class="d-lg-flex d-none">

Visible only on large screens and above as flex

</div>

Exercise 14.2:

<div class="d-none d-md-block bg-light p-3">

Sidebar visible on tablets and larger

</div>

**15. Borders, Shadows, and Rounded Corners**

Exercise 15.1:

<img src="image.jpg" class="border border-primary border-3 rounded-circle" alt="Profile Image" width="150">

Exercise 15.2:

<div class="card shadow-lg rounded-pill p-3">

<div class="card-body">

Rounded Pill Card with Shadow

</div>

</div>

**16. Positioning Utilities**

Exercise 16.1:

<footer class="position-fixed bottom-0 bg-dark text-white w-100 text-center p-2">

Fixed Footer

</footer>

Exercise 16.2:

<div class="position-relative d-inline-block">

<img src="product.jpg" alt="Product" width="200">

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

New

</span>

</div>

**17. Icons with Bootstrap Icons**

Exercise 17.1:

<footer class="text-center p-3">

<i class="bi bi-facebook mx-2"></i>

<i class="bi bi-twitter mx-2"></i>

<i class="bi bi-instagram mx-2"></i>

</footer>

Exercise 17.2:

<button class="btn btn-primary">

<i class="bi bi-arrow-right"></i>

</button>

**18. Bootstrap 5 JavaScript Plugins**

Exercise 18.1:

<button type="button" class="btn btn-primary" data-bs-toggle="modal" data-bs-target="#exampleModal">

Launch Modal

</button>

<div class="modal fade" id="exampleModal" tabindex="-1">

<div class="modal-dialog">

<div class="modal-content">

<div class="modal-header">

<h5 class="modal-title">Modal Title</h5>

<button type="button" class="btn-close" data-bs-dismiss="modal"></button>

</div>

<div class="modal-body">

Modal content goes here.

</div>

</div>

</div>

</div>

Exercise 18.2:

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

<div class="accordion-item">

<h2 class="accordion-header" id="headingOne">

<button class="accordion-button" type="button" data-bs-toggle="collapse" data-bs-target="#collapseOne">

Accordion Item #1

</button>

</h2>

<div id="collapseOne" class="accordion-collapse collapse show" data-bs-parent="#accordionExample">

<div class="accordion-body">

This is the first item's accordion body.

</div>

</div>

</div>

</div>

**19. Customization with Sass**

Exercise 19.1:

npm install bootstrap

@import "node\_modules/bootstrap/scss/bootstrap";

Exercise 19.2:

$primary: #ff5733;

$border-radius: 1rem;

npm run build