



**ACADEMY**  
OF DIGITAL ARTS  
EGYPT






START  
YOUR TECH JOURNEY  
WITH ADA







# Agenda


- Introduction to Bootstrap
  - Grid System
  - Utility Classes
- 



# Introduction to Bootstrap

## What is Bootstrap?

**Bootstrap is a powerful CSS framework that provides:**

- Pre-built components for rapid development
  - Responsive grid system for mobile-first design
  - Utility classes for quick styling
  - Consistent design across all devices
- 

# Bootstrap Setup

## CDN

```
<!DOCTYPE html>
<html Lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Bootstrap Fundamentals</title>
  <!-- Bootstrap CSS -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
  <div class="container">
    <h1 class="text-center text-primary">Welcome to Bootstrap!</h1>
    <p class="lead text-center">Let's build amazing responsive websites</p>
  </div>

  <!-- Bootstrap JS -->
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```




# Grid System Mastery

## Understanding the Grid?

**Bootstrap uses a 12-column system with three key components:**

- Container: `.container` or `.container-fluid`
- Row: `.row`
- Columns: `.col-*`

**Bootstrap uses a 12-column system with three key components:**

- **xs (Extra Small):**  $< 576\text{px}$
  - **sm (Small):**  $\geq 576\text{px}$
  - **md (Medium):**  $\geq 768\text{px}$
  - **lg (Large):**  $\geq 992\text{px}$
  - **xl (Extra Large):**  $\geq 1200\text{px}$
  - **xxl (Extra Extra Large):**  $\geq 1400\text{px}$
- 

# Grid Layouts

## Equal Width Columns

```
<div class="container">
  <div class="row">
    <div class="col bg-primary text-white p-3">Column 1</div>
    <div class="col bg-secondary text-white p-3">Column 2</div>
    <div class="col bg-success text-white p-3">Column 3</div>
  </div>
</div>
```

# Grid System Mastery

## Specific Column Widths

```
<div class="container">
  <!-- 12-column layout -->
  <div class="row mb-3">
    <div class="col-4 bg-info p-3">4 cols wide</div>
    <div class="col-8 bg-warning p-3">8 cols wide</div>
  </div>

  <!-- 6-6 split -->
  <div class="row mb-3">
    <div class="col-6 bg-danger text-white p-3">Half width</div>
    <div class="col-6 bg-dark text-white p-3">Half width</div>
  </div>

  <!-- 3-6-3 layout -->
  <div class="row">
    <div class="col-3 bg-light p-3">Sidebar</div>
    <div class="col-6 bg-primary text-white p-3">Main content</div>
    <div class="col-3 bg-light p-3">Sidebar</div>
  </div>
</div>
```



# Grid System Mastery

## Nested Grids

```
<div class="container">
  <div class="row">
    <div class="col-8">
      <div class="bg-primary text-white p-2 mb-2">Main Content Area</div>
      <!-- Nested grid inside -->
      <div class="row">
        <div class="col-6">
          <div class="bg-info p-3">Nested 1</div>
        </div>
        <div class="col-6">
          <div class="bg-success p-3">Nested 2</div>
        </div>
      </div>
    </div>
    <div class="col-4">
      <div class="bg-warning p-3">Sidebar</div>
    </div>
  </div>
</div>
```

# Responsive Grid Features

## Mobile-First Responsive Design

```
<div class="container">
  <div class="row">
    <!-- Mobile: full width, Tablet: half width, Desktop: one-third -->
    <div class="col-12 col-md-6 col-lg-4 mb-3">
      <div class="bg-primary text-white p-3">
        Mobile: 100% → Tablet: 50% → Desktop: 33%
      </div>
    </div>
    <div class="col-12 col-md-6 col-lg-4 mb-3">
      <div class="bg-secondary text-white p-3">
        Responsive Column 2
      </div>
    </div>
    <div class="col-12 col-md-12 col-lg-4 mb-3">
      <div class="bg-success text-white p-3">
        Mobile: 100% → Tablet: 100% → Desktop: 33%
      </div>
    </div>
  </div>
</div>
```

# Utility Classes

## Spacing Utilities

### Spacing Scale System:

- 0 = 0
- 1 = 0.25rem (4px)
- 2 = 0.5rem (8px)
- 3 = 1rem (16px)
- 4 = 1.5rem (24px)
- 5 = 3rem (48px)

### Spacing Classes Pattern:

- **m** = margin,
- **p** = padding
- **t** = top, **b** = bottom, **s** = start (left), **e** = end (right)
- **x** = horizontal
- **y** = vertical

# Utility Classes

## Basic Spacing

```
<div class="container">
  <!-- Margin examples -->
  <div class="bg-primary text-white p-2 m-3">
    | Margin all sides (1rem)
  </div>
  <div class="bg-secondary text-white p-2 mt-5 mb-2">
    | Large top margin, small bottom margin
  </div>
  <div class="bg-success text-white p-2 mx-auto" style="width: 200px;">
    | Horizontally centered with auto margin
  </div>

  <!-- Padding examples -->
  <div class="bg-warning mt-3">
    | <div class="p-4">Padding all sides (1.5rem)</div>
  </div>
  <div class="bg-info text-white mt-2">
    | <div class="px-5 py-2">Horizontal padding large, vertical small</div>
  </div>
</div>
```

# Utility Classes

## Responsive Spacing

```
<div class="container">  
  <div class="bg-primary text-white p-2 p-md-4 p-lg-5">  
    Responsive padding: small → medium → large screens  
  </div>  
  <div class="bg-secondary text-white p-2 mt-2 mt-md-4 mt-lg-5">  
    Responsive top margin increases with screen size  
  </div>  
</div>
```



# Display & Flexbox Utilities

## Display Control

```
<div class="container">
  <!-- Display utilities -->
  <span class="d-block bg-primary text-white p-2 mb-2">
    Span as block element
  </span>
  <div class="d-inline bg-secondary text-white p-2 me-2">
    Div as inline
  </div>
  <div class="d-inline bg-success text-white p-2">
    Another inline div
  </div>

  <!-- Responsive display -->
  <div class="d-none d-md-block bg-warning p-3 mt-3">
    Hidden on mobile, visible on medium screens and up
  </div>
  <div class="d-block d-lg-none bg-info text-white p-3 mt-2">
    Visible on mobile/tablet, hidden on large screens
  </div>
</div>
```

# Display & Flexbox Utilities

## Flexbox Magic

```
<div class="container">
  <!-- Center everything -->
  <div class="d-flex justify-content-center align-items-center bg-light" style="height: 150px;">
    <div class="bg-primary text-white p-3">Perfectly centered</div>
  </div>

  <!-- Space between items -->
  <div class="d-flex justify-content-between bg-secondary p-3 mt-3">
    <div class="bg-white p-2">Left item</div>
    <div class="bg-white p-2">Center item</div>
    <div class="bg-white p-2">Right item</div>
  </div>

  <!-- Flexible columns -->
  <div class="d-flex mt-3">
    <div class="flex-grow-1 bg-primary text-white p-3 me-2">
      Flexible content that grows
    </div>
    <div class="bg-success text-white p-3" style="width: 200px;">
      Fixed width sidebar
    </div>
  </div>
</div>
```

# Typography & Color Utilities

## Text Styling

```
<div class="container">
  <!-- Text alignment -->
  <p class="text-start bg-light p-2">Left aligned text</p>
  <p class="text-center bg-light p-2">Center aligned text</p>
  <p class="text-end bg-light p-2">Right aligned text</p>

  <!-- Text transformation -->
  <p class="text-uppercase bg-primary text-white p-2">uppercase text</p>
  <p class="text-lowercase bg-secondary text-white p-2">LOWERCASE TEXT</p>
  <p class="text-capitalize bg-success text-white p-2">capitalize each word</p>

  <!-- Font weights and styles -->
  <p class="fw-bold">Bold text for emphasis</p>
  <p class="fw-normal">Normal weight text</p>
  <p class="fw-light">Light weight text</p>
  <p class="fst-italic">Italic styled text</p>
  <p class="text-decoration-underline">Underlined text</p>
</div>
```

# Typography & Color Utilities

## Color System

```
<div class="container">
  <!-- Text colors -->
  <p class="text-primary">Primary brand color text</p>
  <p class="text-secondary">Secondary muted text</p>
  <p class="text-success">Success state text</p>
  <p class="text-danger">Error or danger text</p>
  <p class="text-warning">Warning state text</p>
  <p class="text-info">Information text</p>
  <p class="text-dark">Dark text</p>
  <p class="text-muted">Muted secondary text</p>

  <!-- Background colors -->
  <div class="row mt-3">
    <div class="col-md-6">
      <div class="bg-primary text-white p-3 mb-2">Primary background</div>
      <div class="bg-success text-white p-3 mb-2">Success background</div>
      <div class="bg-danger text-white p-3 mb-2">Danger background</div>
    </div>
    <div class="col-md-6">
      <div class="bg-warning text-dark p-3 mb-2">Warning background</div>
      <div class="bg-info text-white p-3 mb-2">Info background</div>
      <div class="bg-light text-dark p-3 mb-2">Light background</div>
    </div>
  </div>
</div>
```

THANK YOU

ADAEGY     