



**WELCOME**

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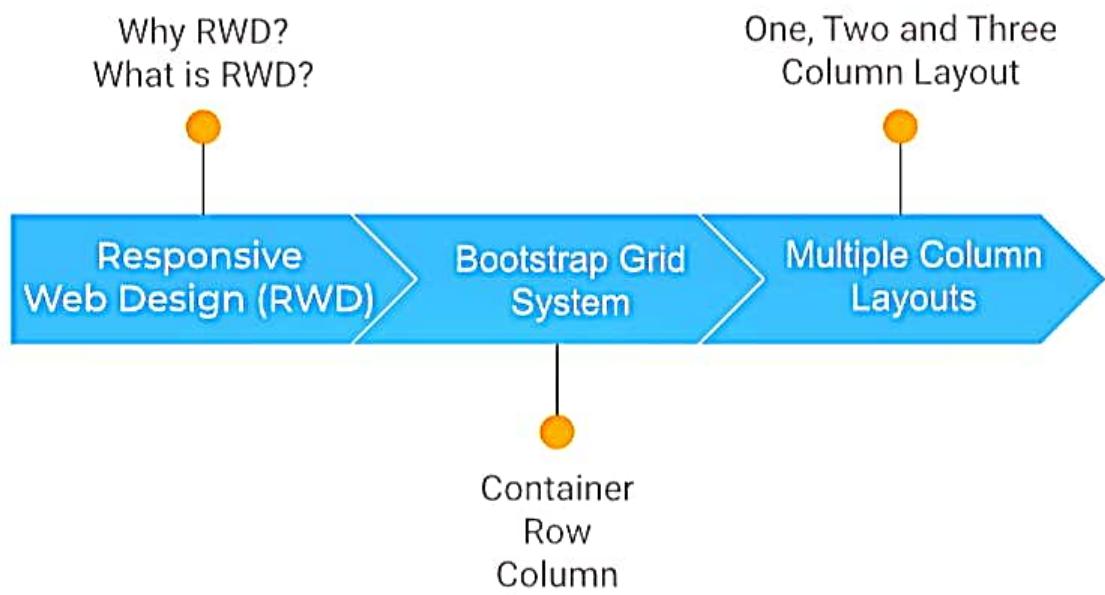


21st Century Skills

## Introduction to Responsive Web Design

## Agenda

# Introduction to Responsive Web Design



Let's see how  
AMAZON  
website looks on a mobile



NXT  
WAVE

## Amazon Website Mobile Version



NXT  
WAVE

Amazon Website

## Mobile Version in Desktop



NXT  
WAVE

## Amazon Website Desktop Version



NXT  
WAVE

Devices

## Wide Variety of Sizes



NXT  
WAVB

## How to Create Websites with Best User Experience Across all The Devices?



NXT  
WAVE

# Responsive Web Design



NXT  
WAVE

Responsive Web Design

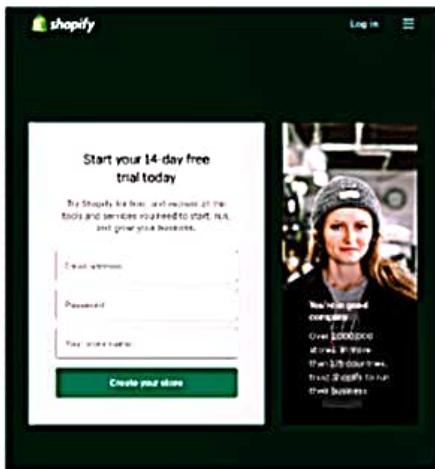
## What is Responsive Web Design?

Responsive Web Design (RWD) is an approach to make web pages give best user experience in all the devices



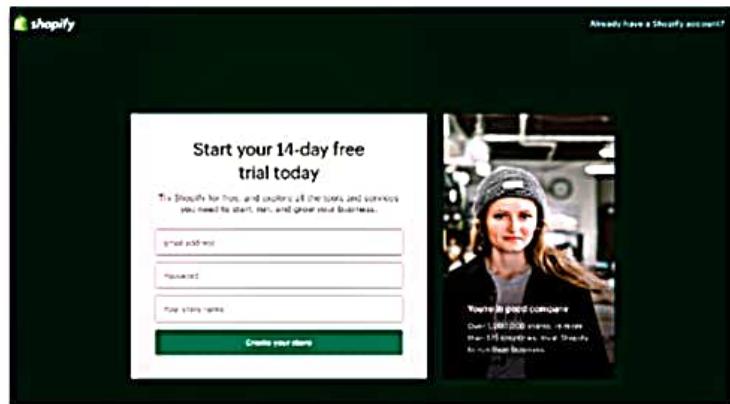
## Responsive Web Design

# shopify.in



Tablet

Mobile



Desktop

## Responsive Web Design

# apple.com



Mobile



Tablet



Desktop

NXT  
WAVE

## Responsive Web Design

# instagram.com

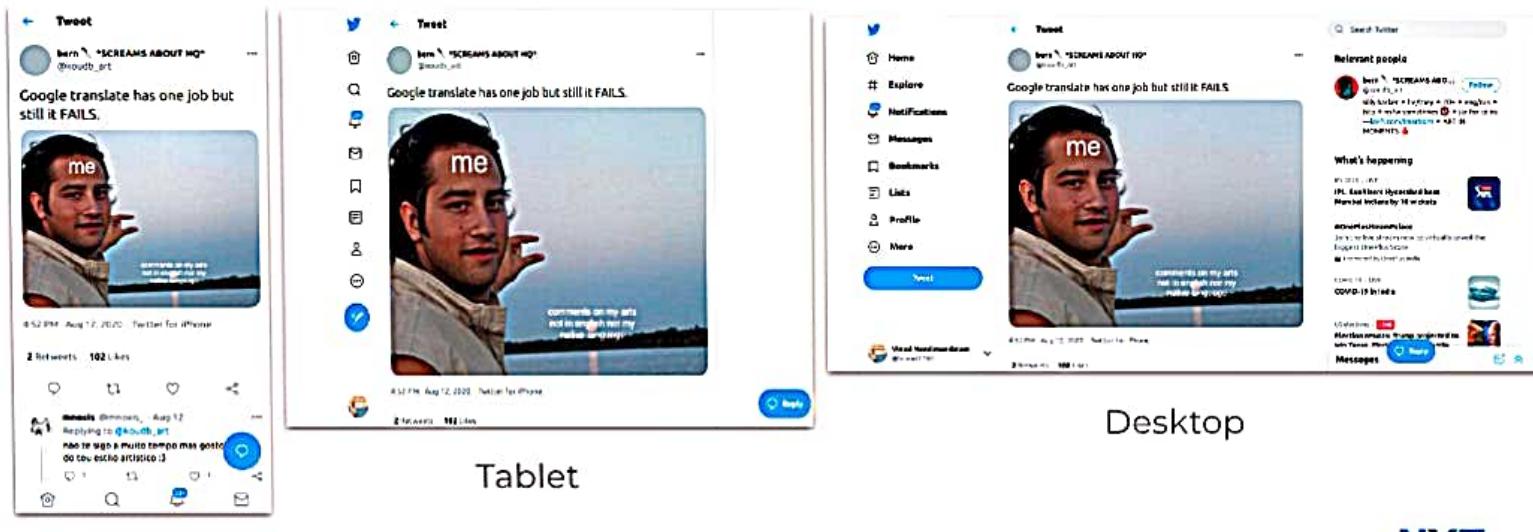
The image displays four versions of the Instagram login page side-by-side, illustrating responsive web design across different devices:

- Mobile:** Shows a compact layout with fields for "Phone number, username or email" and "Password", followed by a large blue "Log In" button. Below it is a "OR" separator, then "Log in with Facebook" and "Forgot password?" links. At the bottom are "Don't have an account? Sign up" and "Get the app" sections with App Store and Google Play links.
- Tablet:** Shows a wider layout with the same fields and buttons as the mobile version, but with more horizontal space.
- Desktop:** Shows a full-width layout with the same fields and buttons, but with a larger overall size.
- Desktop (Second View):** Shows a second desktop view of the Instagram login page, which appears nearly identical to the first but with slight visual differences in the background or font styling.

NXT  
WAVE

## Responsive Web Design

# twitter.com



Mobile

Tablet

Desktop

NXT  
WAVE

# How to Build Responsive Websites?



NXT  
WAVE



# Bootstrap Grid System



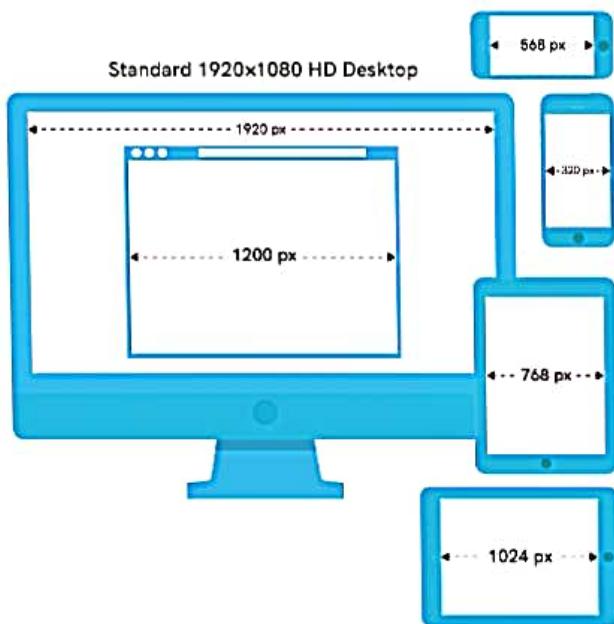
## Bootstrap Grid System

A collection of  
Reusable Code Snippets  
to create **Responsive Layouts**



Devices

## Wide Variety of Sizes



NXT  
WAVE

Bootstrap

## Five Responsive Tiers

To make websites responsive,  
Bootstrap categorizes devices into  
**Five Responsive Tiers**

These are known as **Responsive Breakpoints**

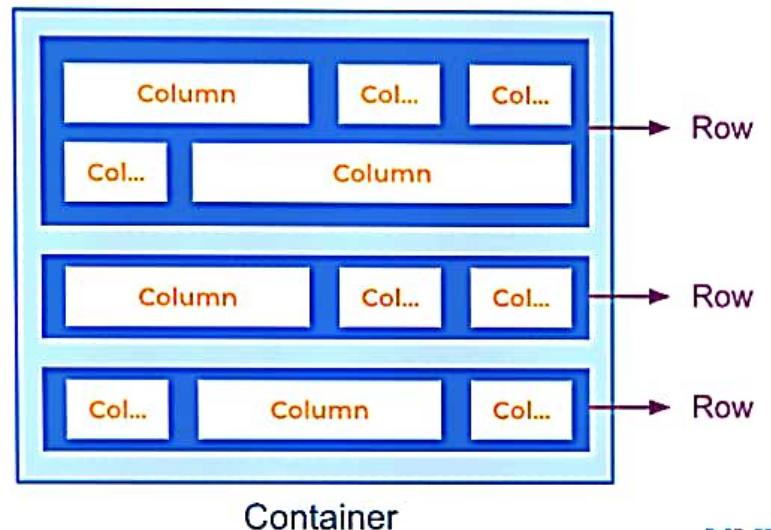
Device	Device Size(width)
Extra small devices	< 576px
Small devices	$\geq 576px$
Medium devices	$\geq 768px$
Large devices	$\geq 992px$
Extra large devices	$\geq 1200px$

## Bootstrap Grid System

# How it works

Bootstrap Grid system is made up of 3 things:

- Container
- Rows
- Columns

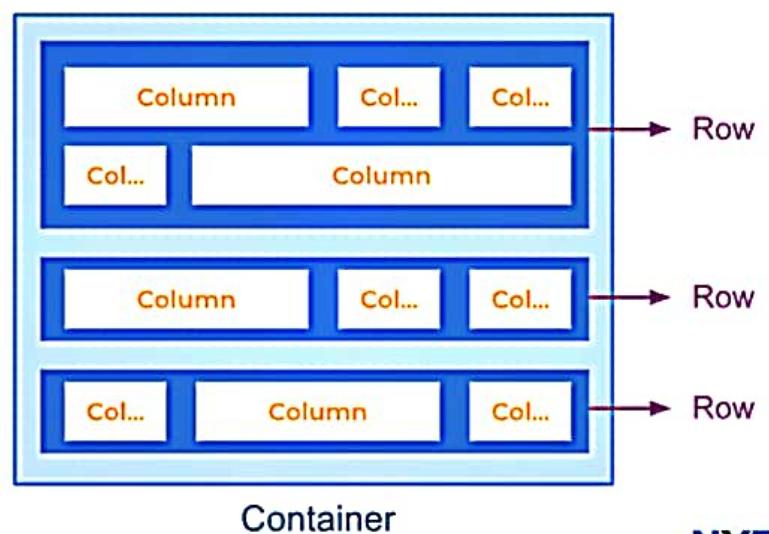


## Bootstrap Grid System

# How it works

A Container consists of Rows and Columns

All the Content should be placed inside these Columns



# Bootstrap Grid System

## How it works

### Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

[Get started](#) [Download](#)



→ Container

→ Row

→ Column



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Bootstrap

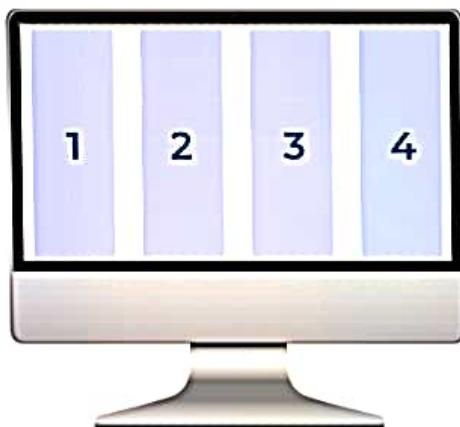
## Grid System

Bootstrap Grid System uses  
**12 column system** for layouting  
We can create up to **12 columns**  
across the page



Grid System

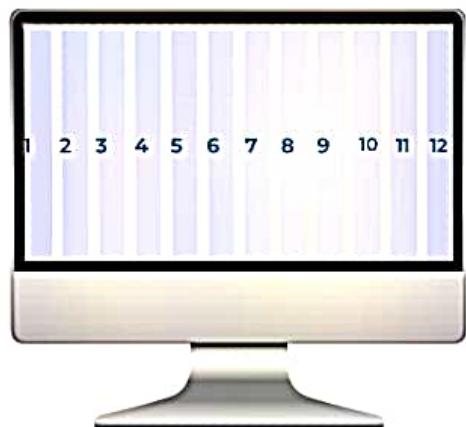
## Different Column Systems



4 Column System



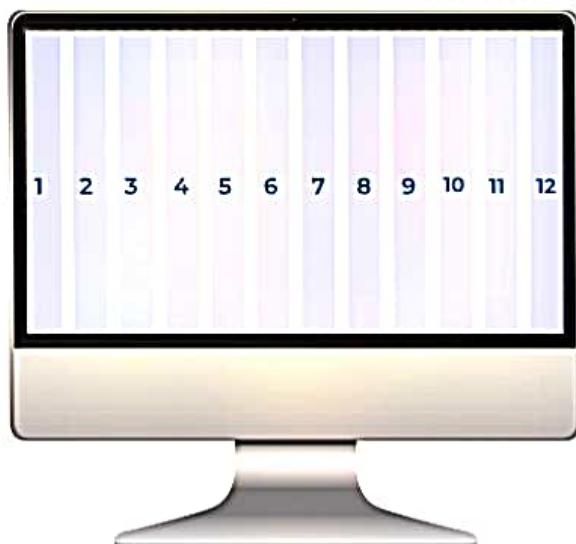
8 Column System



12 Column System

Bootstrap Grid System

## 12 Column System



NXT  
WAVE

## Example Website - Desktop Version

# getbootstrap.com

## Bootstrap

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[Get started](#)

[Download](#)

Currently v4.3.1



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WAVB

## Bootstrap Grid System

# Columns Representation

The screenshot shows the official Bootstrap website's homepage. The layout is a 12-column grid. The first column contains the word "Bootstrap" in large purple font. The second column has two buttons: "Get started" and "Download". The third column displays the text "Currently v4.3.1" above a small advertisement for Adobe Stock. The fourth column features a purple diamond-shaped logo with a white stylized letter "B". The remaining columns (5 through 12) are empty blue bars.

Bootstrap

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Get started   Download

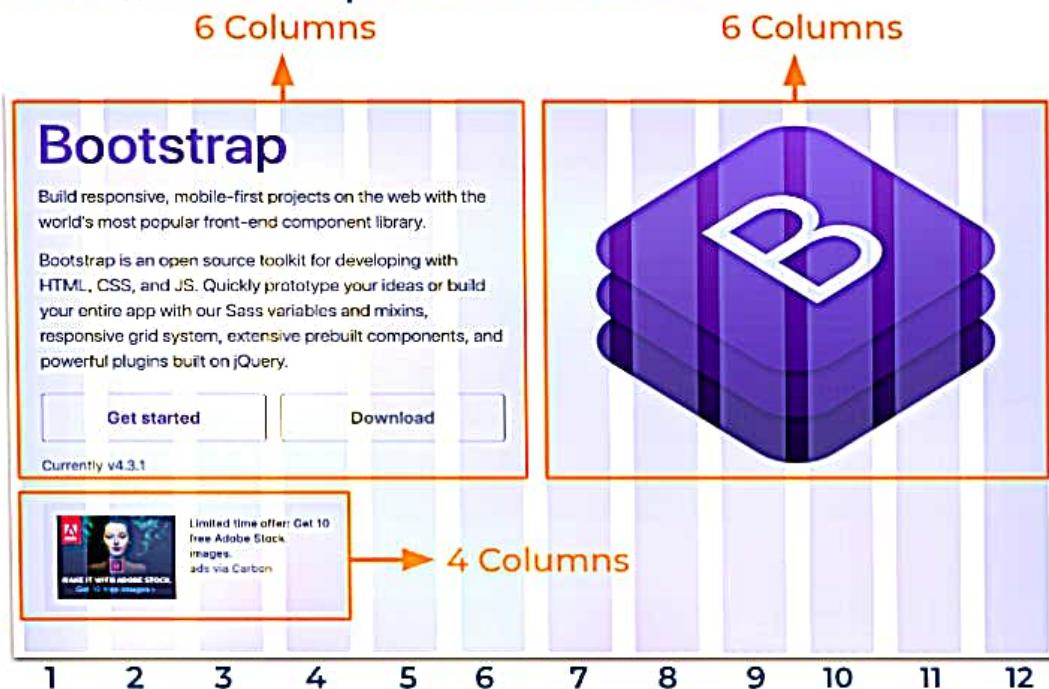
Currently v4.3.1

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ads via Carbon

1 2 3 4 5 6 7 8 9 10 11 12

## Bootstrap Grid System

### Columns Representation

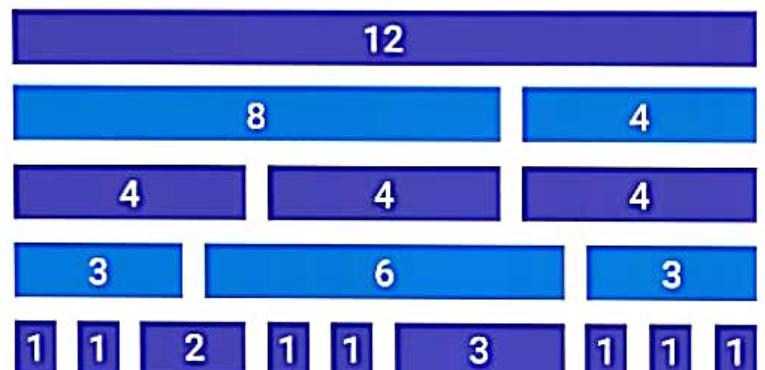


Bootstrap Grid System

## Specifying number of Columns

We can specify number of columns our content should occupy in any device

The number of columns we specify should be any number in range of 1 to 12





# How to Create a Layout Using Bootstrap Grid System?

## Bootstrap Grid System

# Container

A Container is a div Element  
with a class name **container**

The purpose of the Container  
is to **hold** Rows and Columns

```
<div class="container">  
    ...  
</div>
```

## Bootstrap Grid System

# Row

A **Row** is a div Element  
with a classname **row**

The purpose of Row is to  
**wrap** all the Columns

```
<div class="container">  
  <div class="row">  
    ...  
  </div>  
</div>
```

## Bootstrap Grid System

### Column

A **Column** is a div Element with a classname col-\*

We place all our **content** inside this Column

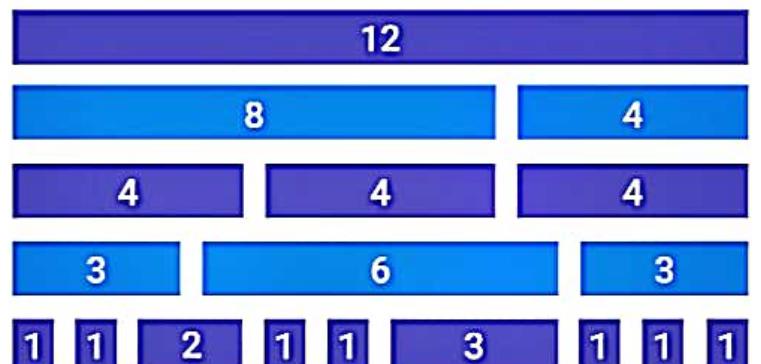
```
<div class="container">
  <div class="row">
    <div class="col-12">
      I'm your content inside the grid!
    </div>
  </div>
</div>
```

## Bootstrap Grid System

### Specifying number of Columns

Add a number to `col-*` in classname to specify the number of Columns

If classname is `col-12` it will occupy entire width available inside the row



## Creating Multiple Column Layouts

## Bootstrap Grid System

### One Column Layout

HTML

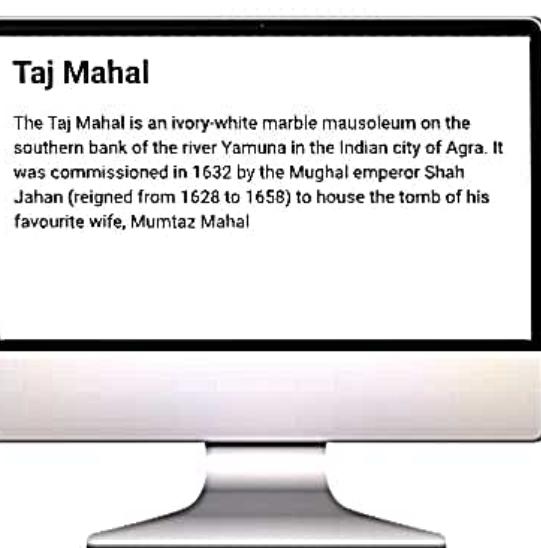
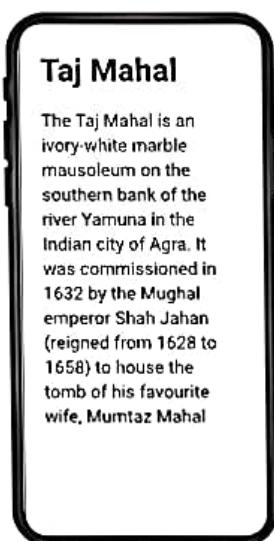
```
<div class="container">
  <div class="row">
    <div class="col-12">
      <h1 class="heading">Taj Mahal</h1>
      <p>
        The Taj Mahal is an ivory-white...
      </p>
    </div>
  </div>
</div>
```

CSS

```
.heading {
  font-size: 24px;
  font-weight: bold;
}
```

## Output in Different Devices

### One Column Layout



## Bootstrap Grid System

### Two Column Layout

HTML

```
<div class="container">
  <div class="row">
    <div class="col-6">
      ...
    </div>
    <div class="col-6">
      ...
    </div>
  </div>
</div>
```

## Output in different Devices

# Two Column Layout

Taj Mahal	Mysore Palace
The Taj Mahal is an ivory-white marble mausoleum on the southern bank of the river Yamuna in the Indian city of Agra. It was commissioned in 1632 by the Mughal emperor Shah Jahan (reigned from 1628 to 1658) to house the tomb of his favourite wife, Mumtaz Mahal.	The Mysore Palace is a historical palace and the royal residence at Mysore in the Indian State of Karnataka. It is the official residence of the Wadiyar dynasty and the seat of the Kingdom of Mysore. The palace is in the centre of Mysore, and faces the Chamundi Hills eastward.

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Bootstrap Grid System

## Three Column Layout

HTML

```
<div class="container">
  <div class="row">
    <div class="col-4">...</div>
    <div class="col-4">...</div>
    <div class="col-4">...</div>
  </div>
</div>
```

Three Column Layout

## Output

### Taj Mahal

The Taj Mahal is an ivory-white marble mausoleum on the southern bank of the river Yamuna in the Indian city of Agra. It was commissioned in 1632 by the Mughal emperor Shah Jahan (reigned from 1628 to 1658) to house the tomb of his favourite wife, Mumtaz Mahal.

### Mysore Palace

The Mysore Palace is a historical palace and the royal residence at Mysore in the Indian State of Karnataka. It is the official residence of the Wadiyar dynasty and the seat of the Kingdom of Mysore. The palace is in the centre of Mysore, and faces the Chamundi Hills eastward.

### Golden Temple

The Mysore Palace is a historical palace and the royal residence at Mysore in the Indian State of Karnataka. It is the official residence of the Wadiyar dynasty and the seat of the Kingdom of Mysore. The palace is in the centre of Mysore, and faces the Chamundi Hills eastward.

## Introduction to Responsive Web Design

### Key Takeaways (Part 1/2)

- ✓ Responsive Web Design
- ✓ Bootstrap Grid System
  - Five Responsive Tiers
  - Container
  - Row
  - Column
- ✓ 12 Column System

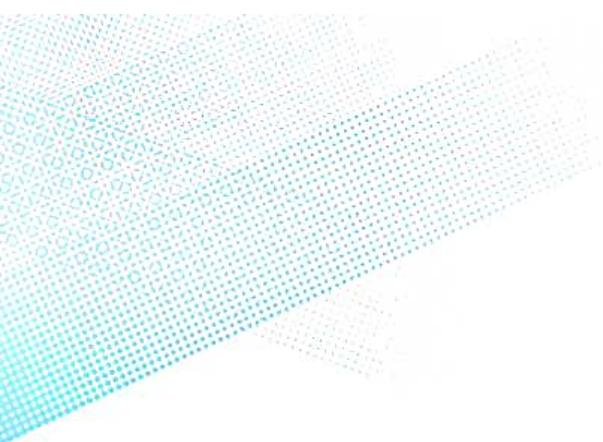


## Introduction to Responsive Web Design

### Key Takeaways (Part 2/2)

- ✓ Multiple Column Layouts
  - One Column Layout
  - Two Column Layout
  - Three Column Layout





Next Session

## Bootstrap Grid System





**THANK YOU**

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