

## **UNIT 2 : DESIGN WEBSITES USING BOOTSTRAP4**

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- 2.1. Bootstrap Introduction
- 2.2. Grid Structure
- 2.3. Table, Colours, Alerts, Form Controls
- 2.4. Buttons and Button Groups
- 2.5 Images, Media Objects
- 2.6 Pagination
- 2.7 Bootstrap Grids
- 2.8 Bootstrap Themes

## 2.1 Bootstrap Introduction

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- ❑ Bootstrap is the **most popular HTML, CSS, and JavaScript framework** for developing **responsive, mobile-first** websites.
  - ❑ Bootstrap is completely **free to download** and use!
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- ❑ Bootstrap is a front-end framework that is developed to support creating dynamic websites and web applications.
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- ❑ Bootstrap is a **free front-end** framework for **faster** and **easier** web development
  - ❑ Bootstrap includes **HTML** and **CSS** based design templates for **typography**, **forms**, **buttons**, **tables**, **navigation**, **modals**, **images** and many other, as well as **optional** JavaScript plugins.
  - ❑ Bootstrap also gives you the ability to easily create **responsive** designs.
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HTML+CSS



HTML+bootstrap



# Bootstrap History

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- ❑ Bootstrap was developed by **Mark Otto** and **Jacob Thornton** at **Twitter**, and released as an open source product in August **2011** on **GitHub**.
  - ❑ **In June 2014 Bootstrap was the No.1 project on GitHub!**
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# What is Responsive Web Design?

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- Responsive web design is about creating web sites which **automatically adjust themselves to look good on all devices**, from **small phones** to **large desktops**.
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# Advantages / Importance of Bootstrap

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- ☐ Easy to use
  - ☐ Responsive feature
  - ☐ Mobile-first Approach
  - ☐ Browser Compatibility
  - ☐ Customizable
  - ☐ Simple Integration
  - ☐ Pre-styled Components
-



# Advantages of Bootstrap:

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- ❑ **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
  - ❑ **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
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- ❑ **Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework
  - ❑ **Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera)
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- ❑ **Customizable:** Bootstrap facilitates customization and helps developers in designing websites, according to their specifications. It has the facility to select any feature that is actually needed to create a customized website. With this feature, one can get rid of what they do not require.
  - ❑ **Simple Integration:** Bootstrap can be simply integrated along with distinct other platforms and frameworks, on existing sites and new ones too. You can also utilize particular elements of Bootstrap along with your current CSS.

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- ❑ **Pre-styled Components** : Bootstrap approaches with pre-styled components for alerts, dropdowns, nav bars, etc. Hence, being a feature-rich, Bootstrap provides numerous advantages of using it.
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# Where to Get Bootstrap?

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- ☐ Download Bootstrap from [getbootstrap.com](https://getbootstrap.com)
  - ☐ Include Bootstrap from a CDN
-

# Download Bootstrap from getbootstrap.com

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- ❑ Just click on Download button
-

# Bootstrap CDN

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- ❑ If you **don't** want to **download** and **host Bootstrap** yourself, you can include it from a **CDN (Content Delivery Network)**.
  - ❑ Get link from
    - **<https://www.bootstrapcdn.com/>**
-

---

□ <link  
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/  
bootstrap.min.css" rel="stylesheet" integrity="sha384-  
ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x  
9JvoRxT2MZw1T" crossorigin="anonymous">

---



## 2.2 Grid Structure

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- ❑ Bootstrap's grid system allows up to **12 columns** across the page.
  - ❑ If you do not want to use all 12 column individually, you can group the columns together to create wider columns:
-

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

- 
- ❑ Bootstrap's grid system is **responsive**, and the **columns** will **re-arrange depending** on the screen **size**: On a **big screen** it might look better with the content organized in three columns, but on a small screen it would be better if the content items were **stacked** on top of each other.
-

# Grid Classes

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- ❑ xs (for phones - screens less than 768px wide)
  - ❑ sm (for tablets - screens equal to or greater than 768px wide)
  - ❑ md (for small laptops - screens equal to or greater than 992px wide)
  - ❑ lg (for laptops and desktops - screens equal to or greater than 1200px wide)
-

# Example

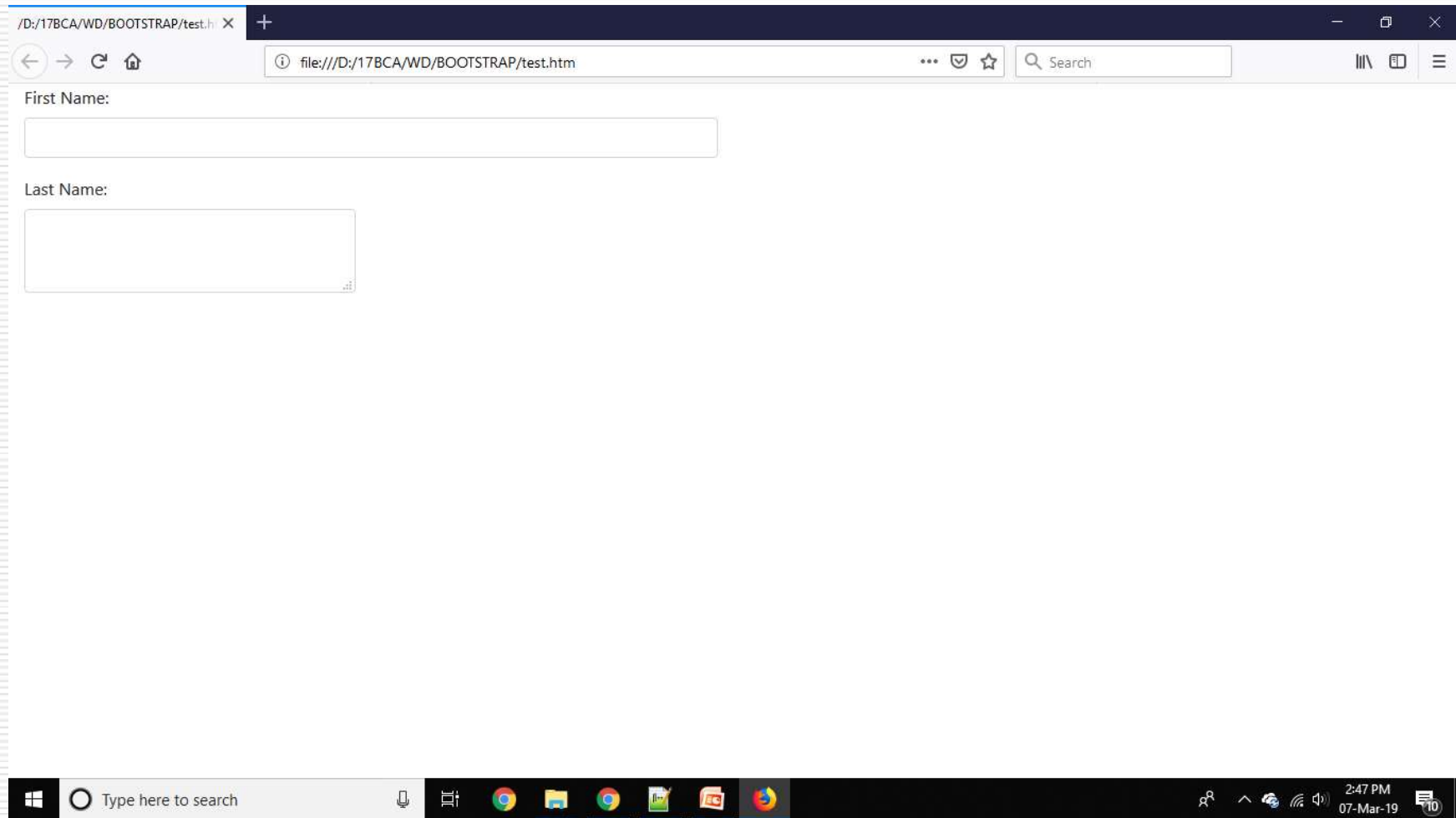
---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.0.0-dist/css/bootstrap.min.css">
</head>
<body>
<div class="form-group col-sm-6">
  <label >First Name:</label>
  <input type="text" required class="form-control">
</div>
<div class="form-group col-sm-3">
  <label >Last Name:</label>
  <textarea class="form-control"></textarea>
</div>
</body>
</html>
```

---

# Output

---



## 2.3. Table, Colours, Alerts, Form Controls

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# Table

---

- ❑ A basic Bootstrap table has a light padding and only horizontal dividers.
  - ❑ The `.table` class adds basic styling to a table:
-



# Table Classes

---

- ☐ .table
  - ☐ .table-striped
  - ☐ .table-bordered
  - ☐ .table-hover
-

# Example: table

---

```
<html>
  <head>
    <link rel="stylesheet" href="bootstrap-4.4.1-dist\css\bootstrap.min.css">
  </head>
  <body>
    <table class="table">
      <tr>
        <td>Sr. No</td>
        <td>name</td>
      </tr>
      <tr>
        <td>1</td>
        <td>Bhavin</td>
      </tr>
      <tr>
        <td>2</td>
        <td>Vivek</td>
      </tr>
      <tr>
        <td>3</td>
        <td>Abhi</td>
      </tr>
    </table>
  </body>
</html>
```

# Output

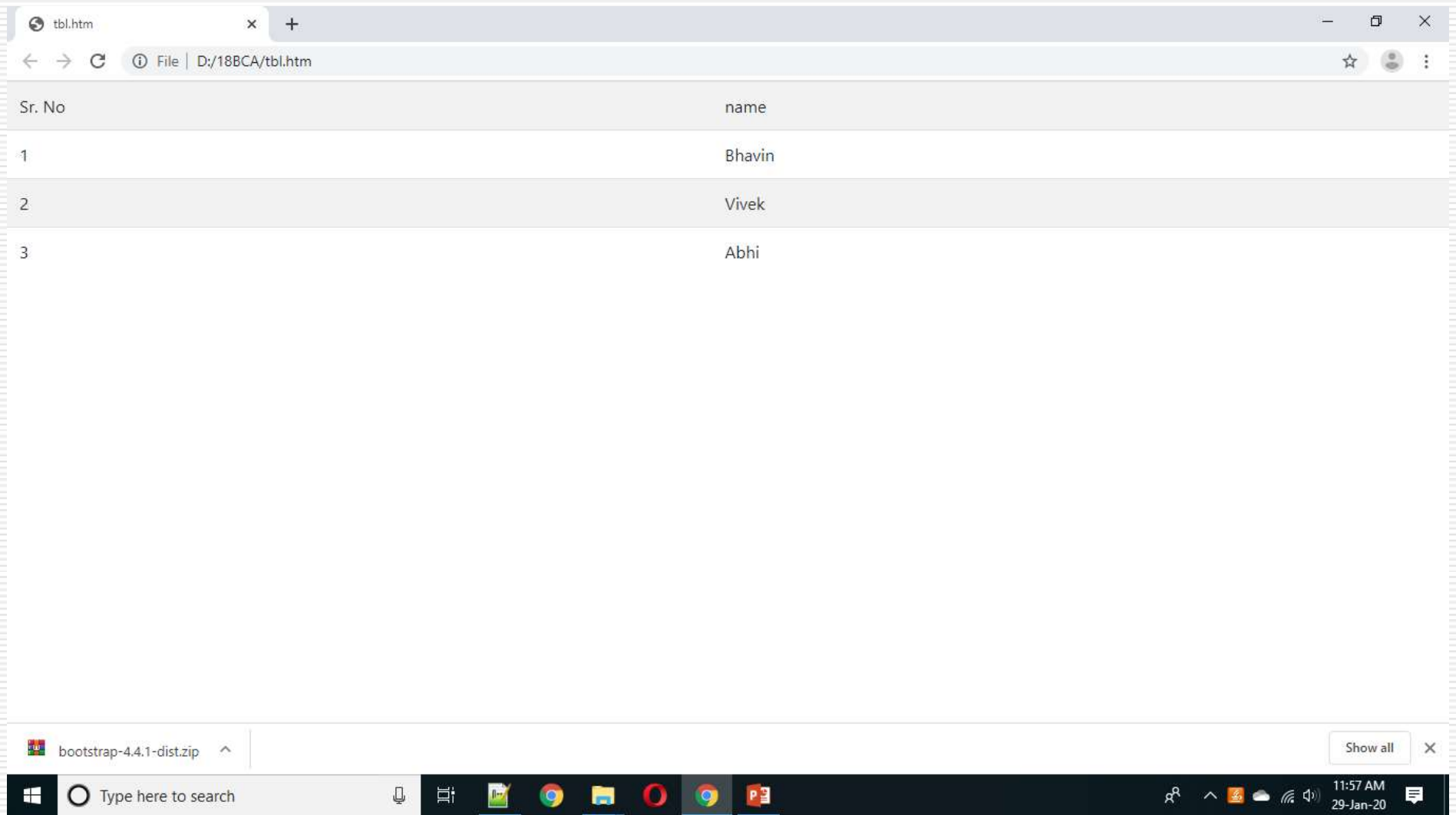
Sr. No	name
1	Bhavin
2	Vivek
3	Abhi

# Example: table-striped

---

```
<html>
  <head>
    <link rel="stylesheet" href="bootstrap-4.4.1-dist\css\bootstrap.min.css">
  </head>
  <body>
    <table class="table table-striped">
      <tr>
        <td>Sr. No</td>
        <td>name</td>
      </tr>
      <tr>
        <td>1</td>
        <td>Bhavin</td>
      </tr>
      <tr>
        <td>2</td>
        <td>Vivek</td>
      </tr>
      <tr>
        <td>3</td>
        <td>Abhi</td>
      </tr>
    </table>
  </body>
</html>
```

# Output



Sr. No	name
1	Bhavin
2	Vivek
3	Abhi

# Example: table-bordered

---

```
<html>
  <head>
    <link rel="stylesheet" href="bootstrap-4.4.1-dist\css\bootstrap.min.css">
  </head>
  <body>
    <table class="table table-bordered">
      <tr>
        <td>Sr. No</td>
        <td>name</td>
      </tr>
      <tr>
        <td>1</td>
        <td>Bhavin</td>
      </tr>
      <tr>
        <td>2</td>
        <td>Vivek</td>
      </tr>
      <tr>
        <td>3</td>
        <td>Abhi</td>
      </tr>
    </table>
  </body>
</html>
```

# Output

Sr. No	name
1	Bhavin
2	Vivek
3	Abhi

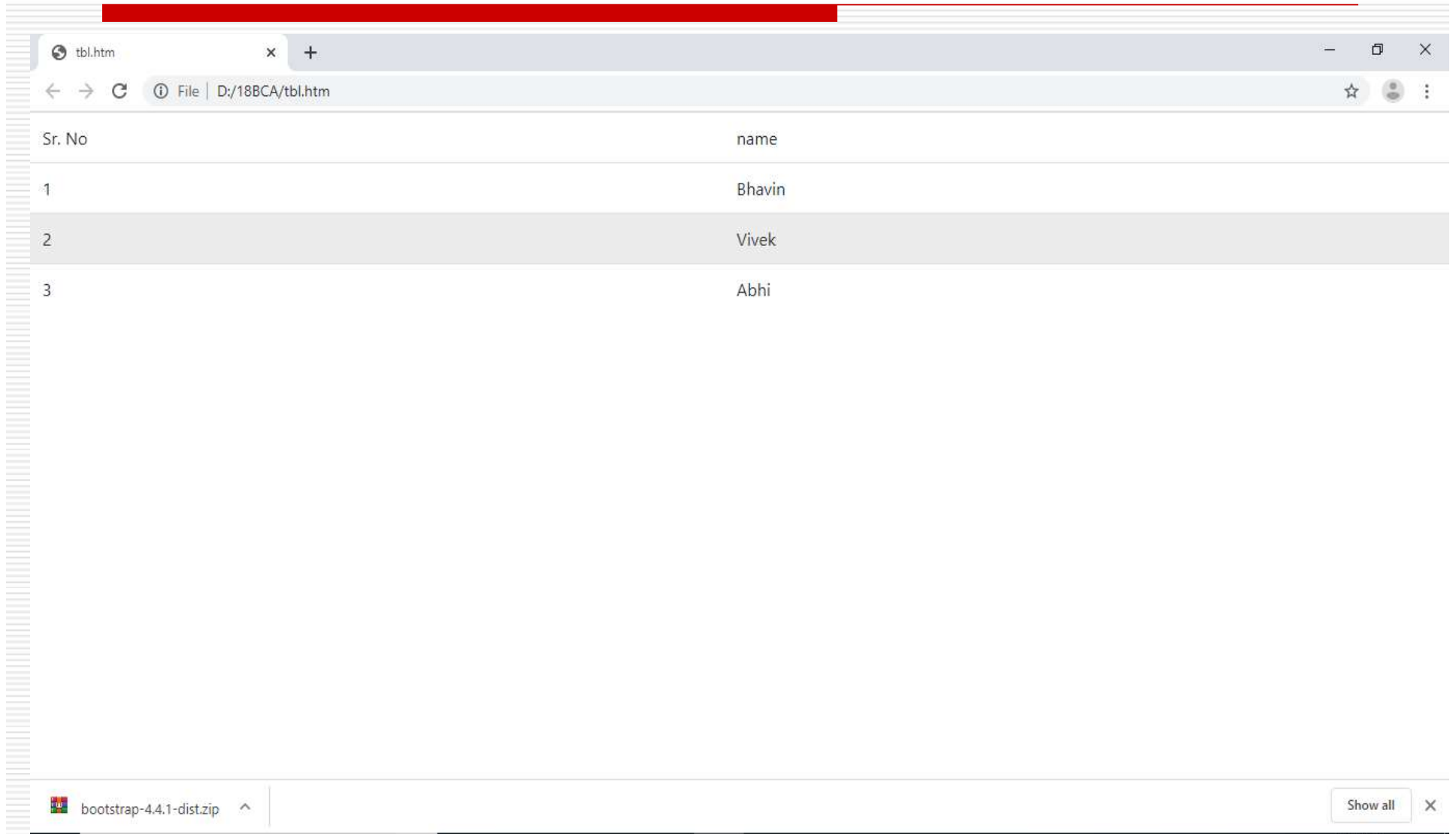
# Example: table-hover

---

```
<html>
  <head>
    <link rel="stylesheet" href="bootstrap-4.4.1-dist\css\bootstrap.min.css">
  </head>
  <body>
    <table class="table table-hover">
      <tr>
        <td>Sr. No</td>
        <td>name</td>
      </tr>
      <tr>
        <td>1</td>
        <td>Bhavin</td>
      </tr>
      <tr>
        <td>2</td>
        <td>Vivek</td>
      </tr>
      <tr>
        <td>3</td>
        <td>Abhi</td>
      </tr>
    </table>
  </body>
</html>
```



# Output



Sr. No	name
1	Bhavin
2	Vivek
3	Abhi

# Colors

---

- ❑ Bootstrap 4 has some contextual classes that can be used to provide "meaning through colors".
-

# Classes

---

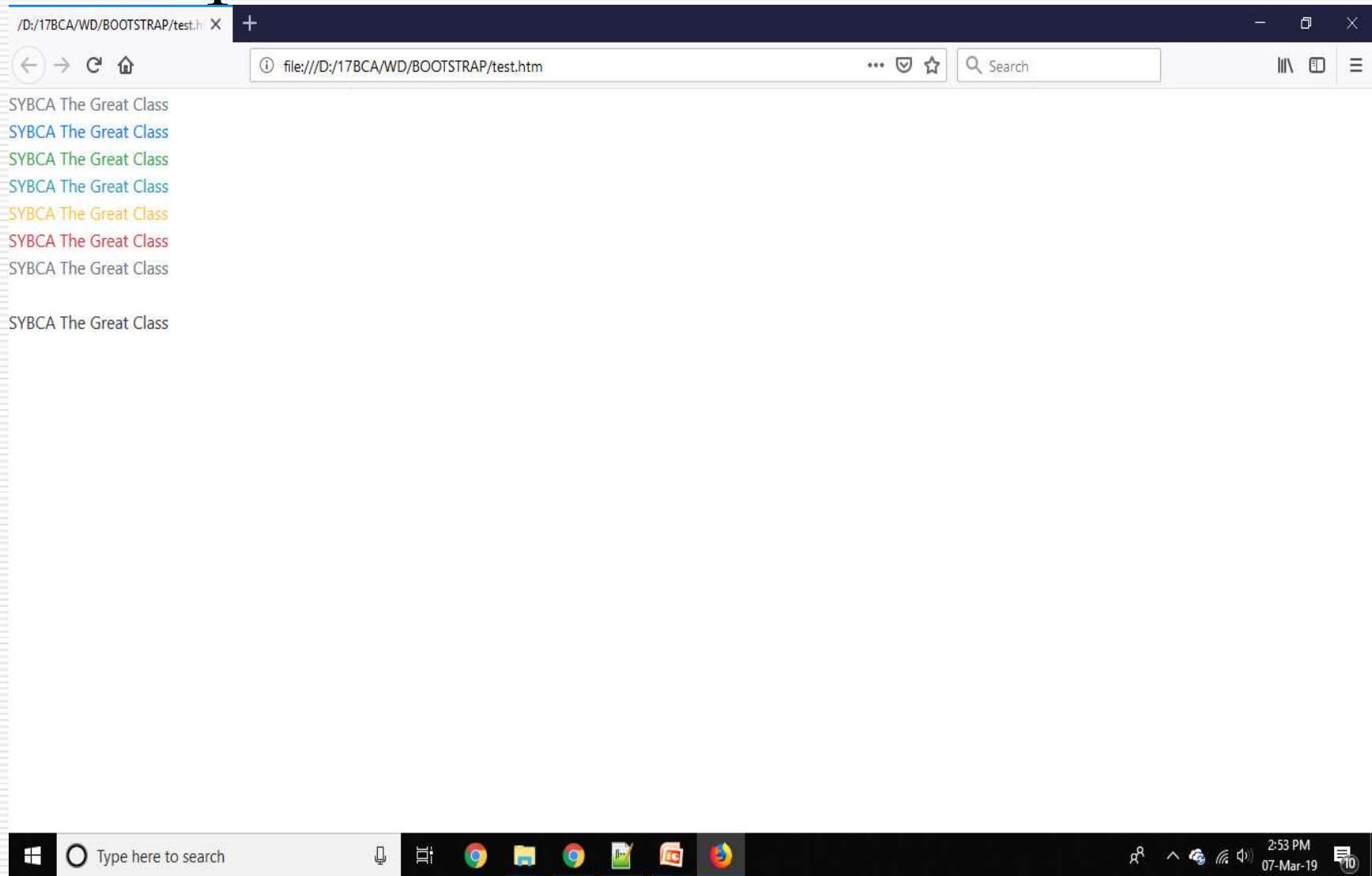
- ☐ .text-muted
  - ☐ .text-primary
  - ☐ .text-success
  - ☐ .text-info
  - ☐ .text-warning
  - ☐ .text-danger
  - ☐ .text-secondary
  - ☐ .text-white
  - ☐ .text-dark
-

# Example:

---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.4.1-dist/css/bootstrap.min.css">
</head>
<body>
<div class="text-muted">SYBCA The Great Class</div>
<div class="text-primary">SYBCA The Great Class</div>
<div class="text-success">SYBCA The Great Class</div>
<div class="text-info">SYBCA The Great Class</div>
<div class="text-warning">SYBCA The Great Class</div>
<div class="text-danger">SYBCA The Great Class</div>
<div class="text-secondary">SYBCA The Great Class</div>
<div class="text-white">SYBCA The Great Class</div>
<div class="text-dark">SYBCA The Great Class</div>
</body>
</html>
```

# Output:



# Alert

---

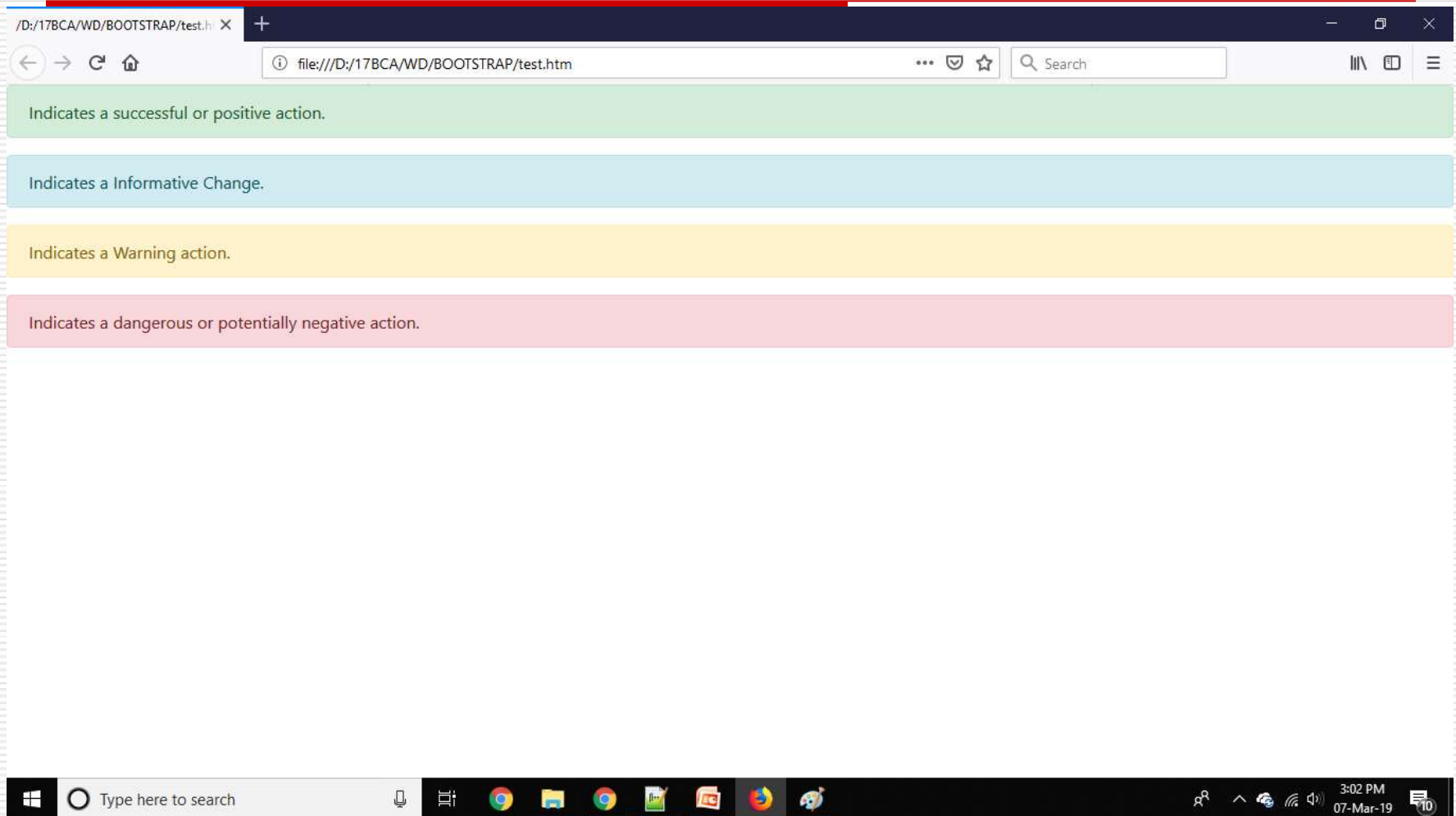
- ❑ Bootstrap provides an easy way to create predefined alert messages.
-

# Example:

---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.4.1-dist/css/bootstrap.min.css">
</head>
<body>
  <div class="alert alert-success">
    Indicates a successful or positive action.
  </div>
  <div class="alert alert-info">
    Indicates a Informative Change.
  </div>
  <div class="alert alert-warning">
    Indicates a Warning action.
  </div>
  <div class="alert alert-danger">
    Indicates a dangerous or potentially negative action.
  </div>
</body>
</html>
```

# OUTPUT





# Form Controls

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- ❑ Form controls automatically receive some global styling with Bootstrap:
  - ❑ All textual `<input>`, `<textarea>`, and `<select>` elements with class `.form-control` have a width of 100%.
-

# Bootstrap Form Layouts

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- Bootstrap provides three types of form layouts:
    - Vertical form (this is default)
    - Horizontal form
    - Inline form
-

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□ Standard rules for all three form layouts:

■ Wrap labels and form controls in `<div class="form-group">` (needed for optimum spacing)

□ Add class `.form-control` to all textual `<input>`, `<textarea>`, and `<select>` elements

---

# Example:

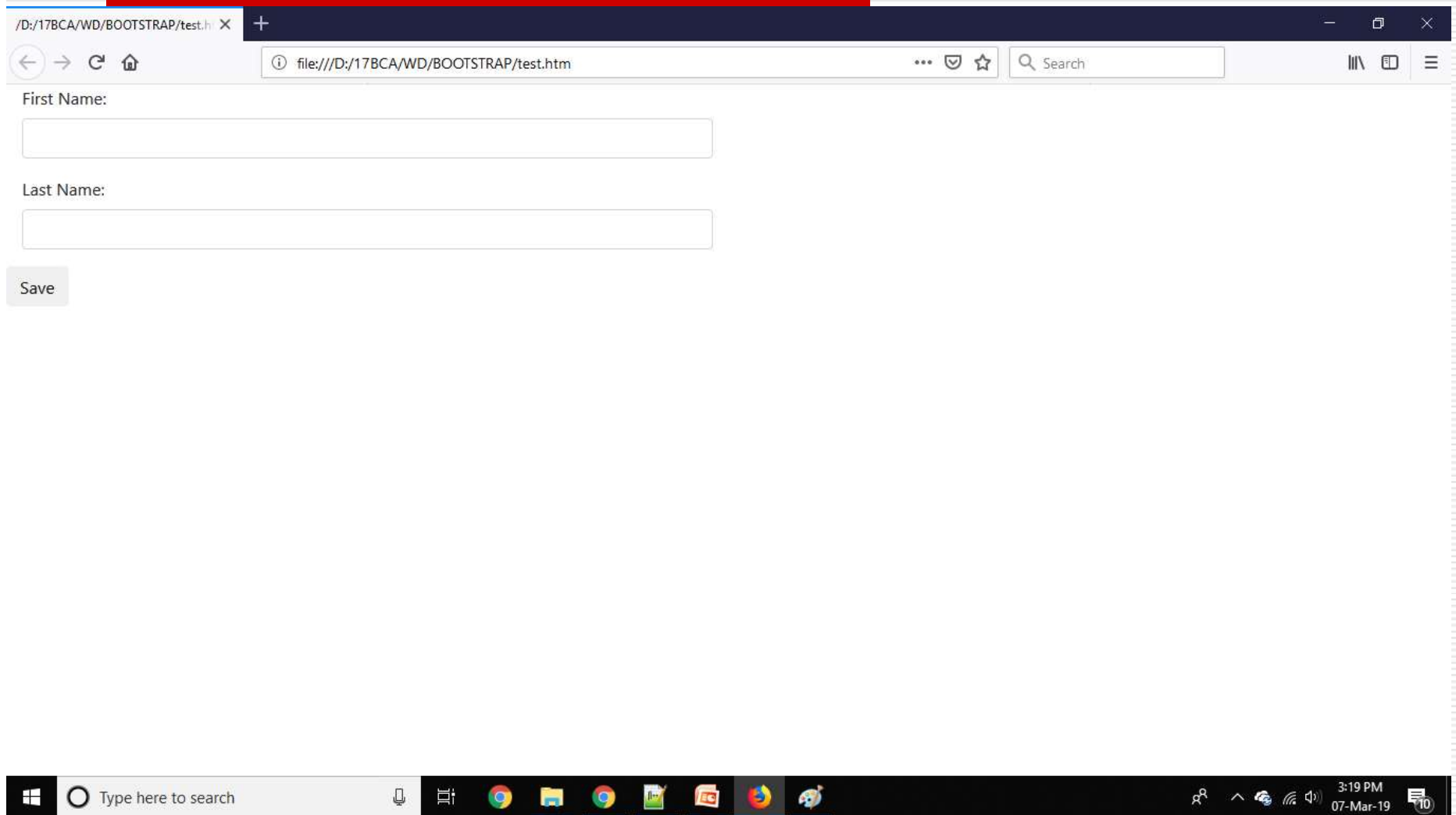
---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.4.1-dist/css/bootstrap.min.css">
</head>
<body>
<form>
<div class="form-group col-sm-6">
  <label >First Name:</label>
  <input type="text" required class="form-control">
</div>
<div class="form-group col-sm-6">
  <label >Last Name:</label>
  <input type="text" required class="form-control">
</div>
<div class="form-group">
<button type="submit" class="btn">Save</button>
</div>

</body>
</html>
```

---

# Output:



A screenshot of a web browser window displaying a Bootstrap form. The browser's address bar shows the file path `file:///D:/17BCA/WD/BOOTSTRAP/test.htm`. The form contains two text input fields labeled "First Name:" and "Last Name:", and a "Save" button. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with the time 3:19 PM on 07-Mar-19.

First Name:

Last Name:

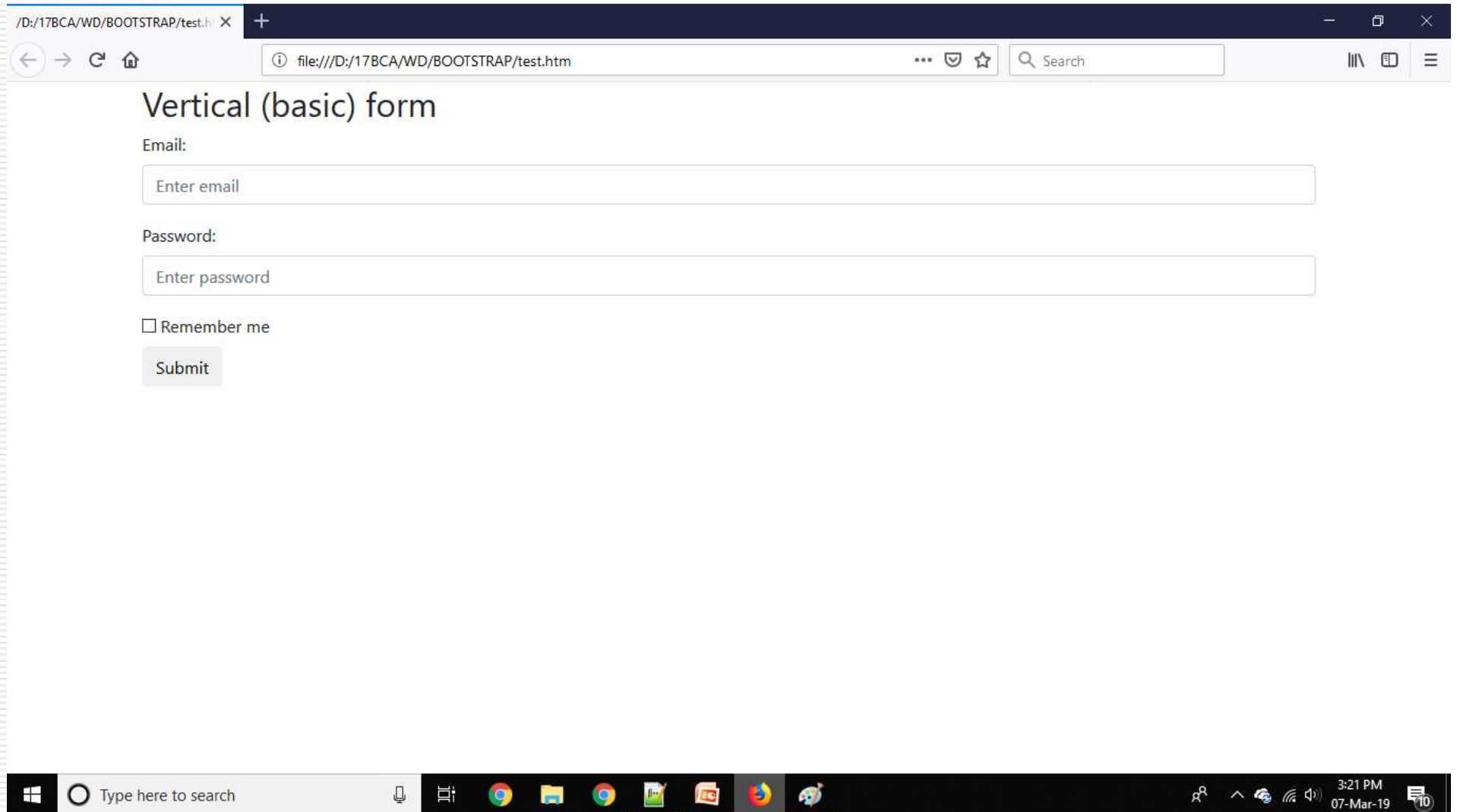
Save

# Example:

---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.4.1-dist/css/bootstrap.min.css">
</head>
<body>
<div class="container">
  <h2>Vertical (basic) form</h2>
  <form action="/action_page.php">
    <div class="form-group">
      <label for="email">Email:</label>
      <input type="email" class="form-control" id="email" placeholder="Enter email" name="email">
    </div>
    <div class="form-group">
      <label for="pwd">Password:</label>
      <input type="password" class="form-control" id="pwd" placeholder="Enter password" name="pwd">
    </div>
    <div class="checkbox">
      <label><input type="checkbox" name="remember"> Remember me</label>
    </div>
    <button type="submit" class="btn btn-default">Submit</button>
  </form>
</div>
</body>
</html>
```

# Output:



The screenshot shows a web browser window with a single tab titled "/D:/17BCA/WD/BOOTSTRAP/test.htm". The address bar shows the file path "file:///D:/17BCA/WD/BOOTSTRAP/test.htm". The browser's navigation bar includes back, forward, and home buttons, as well as a search bar. The main content area displays a form titled "Vertical (basic) form". The form consists of the following elements:

- A label "Email:" followed by a text input field containing the placeholder text "Enter email".
- A label "Password:" followed by a text input field containing the placeholder text "Enter password".
- A checkbox labeled "Remember me".
- A "Submit" button.

The Windows taskbar is visible at the bottom of the screen, showing the Start button, a search bar, and several application icons including Chrome, File Explorer, and the taskbar itself. The system clock in the bottom right corner indicates the time is 3:21 PM on 07-Mar-19.

## 2.4. Buttons and Button Groups

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# Buttons

---

- ❑ Bootstrap provides different styles of buttons:



# Classes

---

- ☐ .btn
  - ☐ .btn-default
  - ☐ .btn-primary
  - ☐ .btn-success
  - ☐ .btn-info
  - ☐ .btn-warning
  - ☐ .btn-danger
  - ☐ .btn-link
-

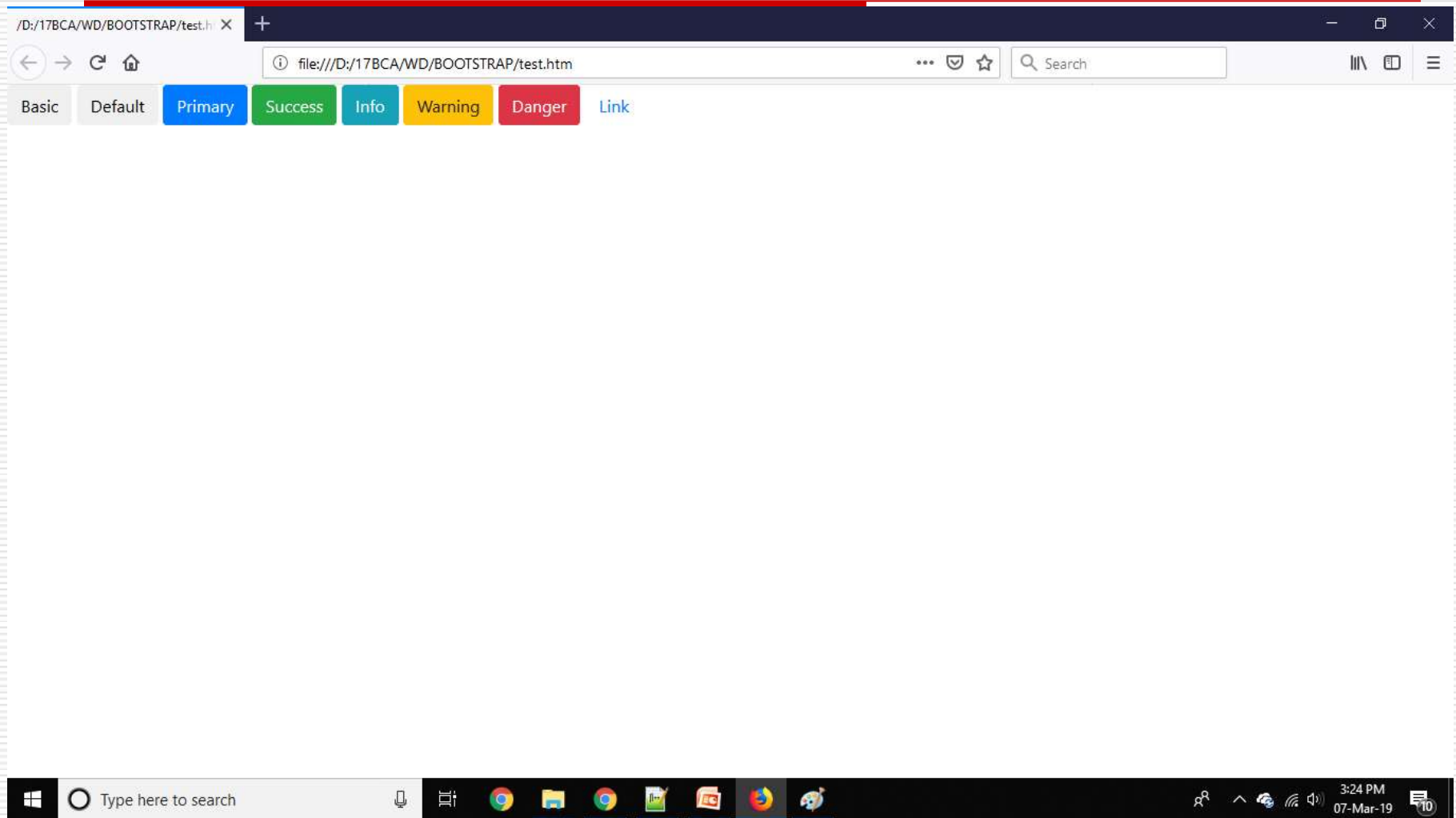
# Example:

---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.0.0-dist/css/bootstrap.min.css">
</head>
<body>
<button type="button" class="btn">Basic</button>
<button type="button" class="btn btn-default">Default</button>
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-link">Link</button>
</body>
</html>
```

---

# Output:



# Button Groups

---

- Group a series of buttons together on a single line with the button group, and super-power them with JavaScript.
-

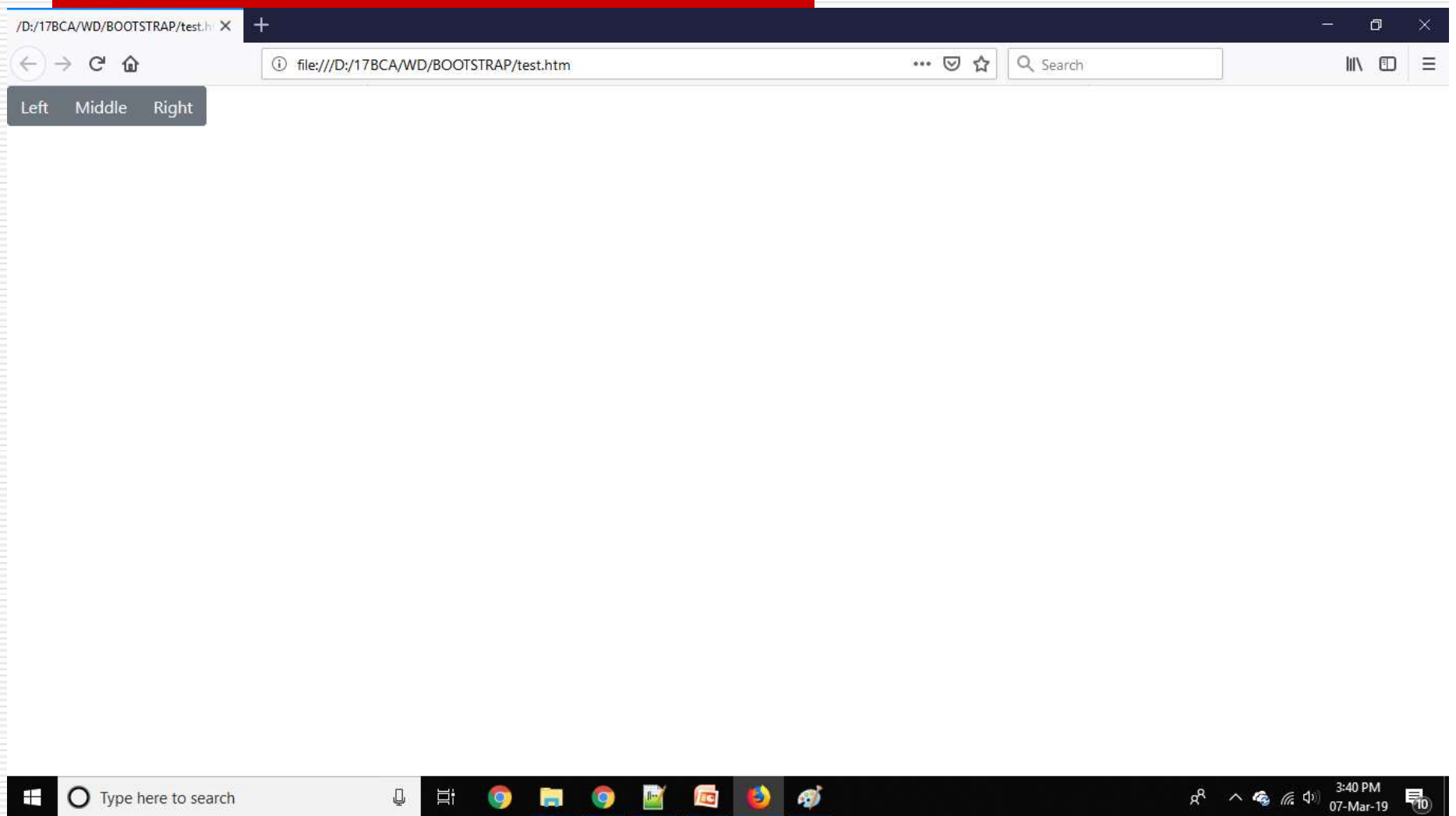
# Example:

---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.0.0-dist/css/bootstrap.min.css">
</head>
<body>
<div class="btn-group" role="group" aria-label="Basic example">
  <button type="button" class="btn btn-secondary">Left</button>
  <button type="button" class="btn btn-secondary">Middle</button>
  <button type="button" class="btn btn-secondary">Right</button>
</div>
</body>
</html>
```

---

# Output:



# Button toolbar

---

- ❑ Combine sets of button groups into button toolbars for more complex components. Use utility classes as needed to space out groups, buttons, and more.
-



# Example:

---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.0.0-dist/css/bootstrap.min.css">
</head>
<body>
<div class="btn-toolbar" role="toolbar" aria-label="Toolbar with button groups">
  <div class="btn-group mr-2" role="group" aria-label="First group">
    <button type="button" class="btn btn-secondary">1</button>
    <button type="button" class="btn btn-secondary">2</button>
    <button type="button" class="btn btn-secondary">3</button>
    <button type="button" class="btn btn-secondary">4</button>
  </div>
  <div class="btn-group mr-2" role="group" aria-label="Second group">
    <button type="button" class="btn btn-secondary">5</button>
    <button type="button" class="btn btn-secondary">6</button>
    <button type="button" class="btn btn-secondary">7</button>
  </div>
  <div class="btn-group" role="group" aria-label="Third group">
    <button type="button" class="btn btn-secondary">8</button>
  </div>
</div>
</body>
</html>
```

---

# Output:



# Vertical Buttons:

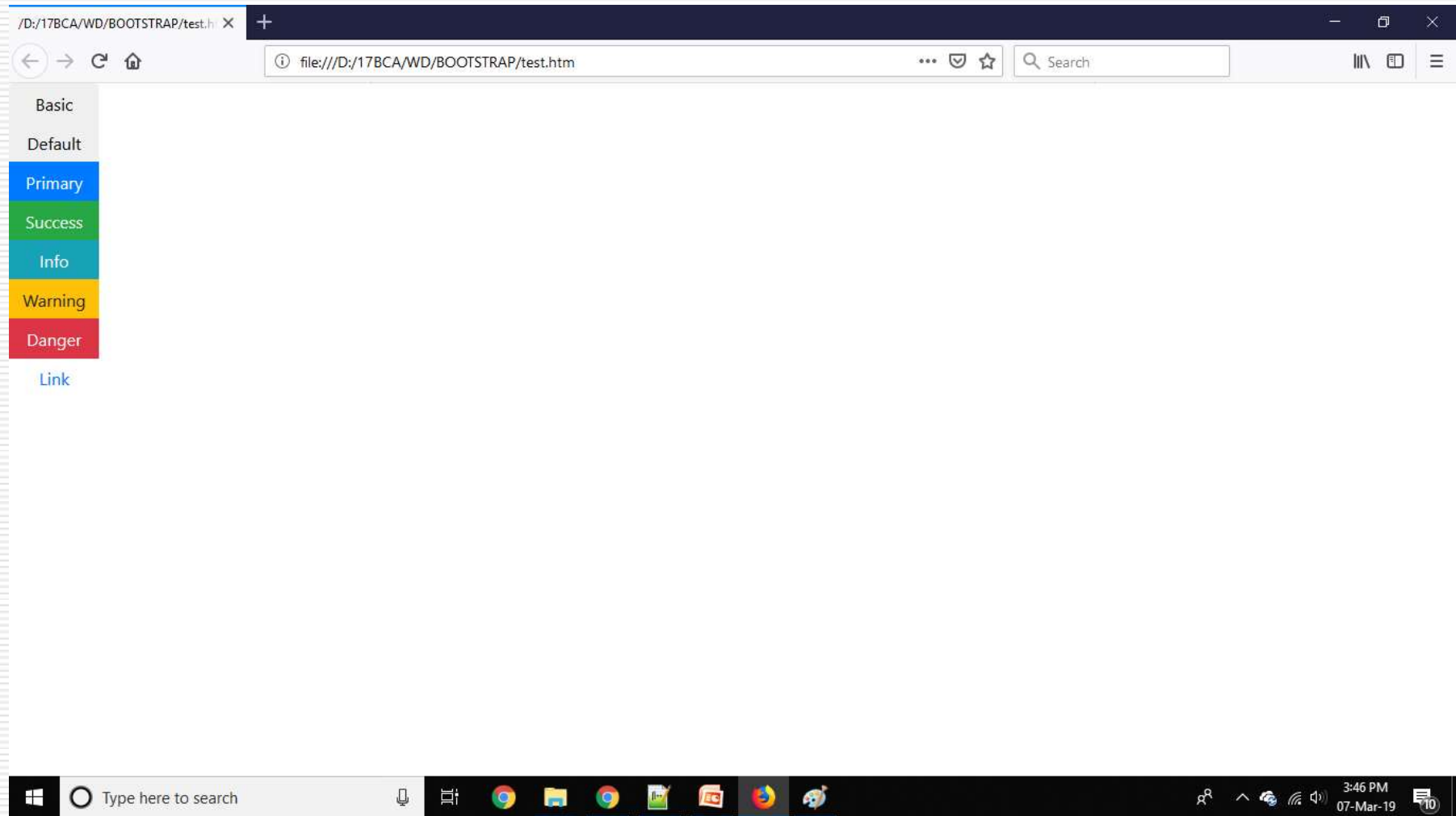
---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.0.0-dist/css/bootstrap.min.css">
</head>
<body>
<div class="btn-group-vertical" >
  <button type="button" class="btn">Basic</button>
  <button type="button" class="btn btn-default">Default</button>
  <button type="button" class="btn btn-primary">Primary</button>
  <button type="button" class="btn btn-success">Success</button>
  <button type="button" class="btn btn-info">Info</button>
  <button type="button" class="btn btn-warning">Warning</button>
  <button type="button" class="btn btn-danger">Danger</button>
  <button type="button" class="btn btn-link">Link</button>
</div>

</div>
</body>
</html>
```

---

# Output:



## 2.5 Images, Media Objects

---

- ❑ Images in Bootstrap are made responsive with `.img-fluid`. `max-width: 100%;` and `height: auto;` are applied to the image so that it scales with the parent element.
-

- 
- ☐ rounded-circle
  - ☐ img-thumbnail
  - ☐ img-fluid
-

# Example:

---

```
<HTML>
```

```
<head>
```

```
<title>welcome to sybca</title>
```

```
<link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css">
```

```
</head>
```

```
<body>
```

```
    <h1>vtcbb</h1>
```

```
    
```

```
</body>
```

```
</HTML>
```

---

# Media Object

---

- ❑ Bootstrap provides an easy way to align media objects (like images or videos) to the left or to the right of some content. This can be used to display blog comments, tweets and so on.
-



---

☐ .media

☐ .media-body

---

---

```
<div class="container mt-3">
  <h2>Media Object</h2>
  <p>Create a media object with the .media and .media-body classes:</p>
  <div class="media border p-3">
    
    <div class="media-body">
      <h4>John Doe <small><i>Posted on February 19,
2016</i></small></h4>
      <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
eiusmod tempor incididunt ut labore et dolore magna aliqua.</p>
    </div>
  </div>
</div>
```

---

# Top, Middle or Bottom Alignment

---

- ☐ .align-self-start
  - ☐ .align-self-center
  - ☐ .align-self-end
-

## Example:

---

```
<div class="media">  
    
  <div class="media-body">  
    <h4>Media Top</h4>  
    <p>Lorem ipsum...</p>  
  </div>  
</div>
```

---



## Media Top

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

## 2.6 Pagination

---

- ❑ If you have a web site with lots of pages, you may wish to add some sort of pagination to each page.
  - ❑ To create a basic pagination, add the .pagination class to an <ul> element:
-

- 
- ☐ .pagination
  - ☐ .pagination-lg or .pagination-sm
  - ☐ .breadcrumb
  - ☐ .active
  - ☐ .disabled
-

# CLASSES

---

- <UL>
    - .pagination
  - <LI>
    - .page-item
  - <A>
    - .page-link
-



---

```
□ <ul class="pagination">
  <li class="page-item"><a class="page-
link" href="#">Previous</a></li>
  <li class="page-item"><a class="page-link" href="#">1</a></li>
  <li class="page-item"><a class="page-link" href="#">2</a></li>
  <li class="page-item"><a class="page-link" href="#">3</a></li>
  <li class="page-item"><a class="page-
link" href="#">Next</a></li>
</ul>
```

---

# Active State

---

- ❑ The .active class is used to "highlight" the current page:

---

```
<ul class="pagination">
  <li class="page-item"><a class="page-link" href="#">Previous</a></li>
  <li class="page-item"><a class="page-link" href="#">1</a></li>
  <li class="page-item active"><a class="page-link" href="#">2</a></li>
  <li class="page-item"><a class="page-link" href="#">3</a></li>
  <li class="page-item"><a class="page-link" href="#">Next</a></li>
</ul>
```

---

# Pagination Sizing

---

- ❑ Add class `.pagination-lg` for larger blocks or `.pagination-sm` for smaller blocks:
-

# Example:

---

```
<ul class="pagination pagination-lg">
  <li class="page-item"><a class="page-link" href="#">Previous</a></li>
  <li class="page-item"><a class="page-link" href="#">1</a></li>
  <li class="page-item"><a class="page-link" href="#">2</a></li>
  <li class="page-item"><a class="page-link" href="#">3</a></li>
  <li class="page-item"><a class="page-link" href="#">Next</a></li>
</ul>
```

```
<ul class="pagination pagination-sm">
  <li class="page-item"><a class="page-link" href="#">Previous</a></li>
  <li class="page-item"><a class="page-link" href="#">1</a></li>
  <li class="page-item"><a class="page-link" href="#">2</a></li>
  <li class="page-item"><a class="page-link" href="#">3</a></li>
  <li class="page-item"><a class="page-link" href="#">Next</a></li>
</ul>
```

---

# Breadcrumbs

---

- ❑ The `.breadcrumb` and `.breadcrumb-item` classes indicates the current page's location within a navigational hierarchy:
-

# Example:

---

```
<ul class="breadcrumb">
  <li class="breadcrumb-item"><a href="#">Photos</a></li>
  <li class="breadcrumb-item"><a href="#">Summer 2017</a></li>
  <li class="breadcrumb-item"><a href="#">Italy</a></li>
  <li class="breadcrumb-item active">Rome</li>
</ul>
```

---

# Output:

---



## 2.7 Bootstrap Grids

---

- ❑ Bootstrap's grid system allows up to **12 columns** across the page.
  - ❑ If you do not want to use all 12 column individually, you can group the columns together to create wider columns:
-

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

- 
- ❑ Bootstrap's grid system is **responsive**, and the **columns** will **re-arrange depending** on the screen **size**: On a **big screen** it might look better with the content organized in three columns, but on a small screen it would be better if the content items were **stacked** on top of each other.
-

# Grid Classes

---

- ❑ xs (for phones - screens less than 768px wide)
  - ❑ sm (for tablets - screens equal to or greater than 768px wide)
  - ❑ md (for small laptops - screens equal to or greater than 992px wide)
  - ❑ lg (for laptops and desktops - screens equal to or greater than 1200px wide)
-

# Example

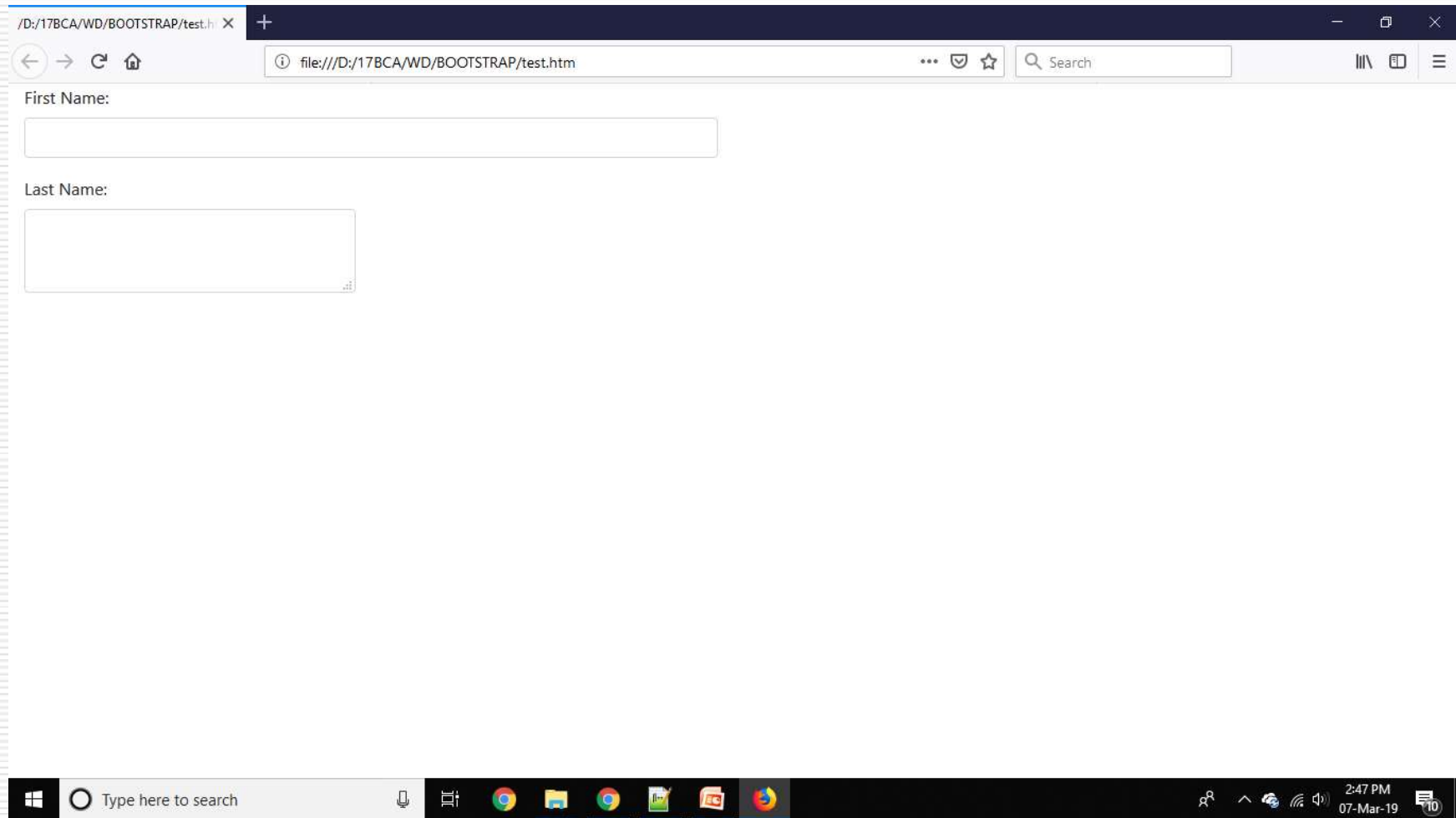
---

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="bootstrap-4.0.0-dist/css/bootstrap.min.css">
</head>
<body>
<div class="form-group col-sm-6">
  <label >First Name:</label>
  <input type="text" required class="form-control">
</div>
<div class="form-group col-sm-3">
  <label >Last Name:</label>
  <textarea class="form-control"></textarea>
</div>
</body>
</html>
```

---

# Output

---



## 2.8 Bootstrap Themes

---