Q1. Design a responsive webpage using Bootstrap grids: Create a layout with four rows,
each styled with a solid border and a light green background.
i. First row: Divide into two equal columns for extra small screen sizes (<576px).
ii. Second row: Divide into three equal columns for extra small screen sizes (<576px).
iii. Third row: Divide into four equal columns for small screen sizes (≥576px).
iv. Fourth row: Divide into six equal columns for medium screen sizes (≥768px).

SOLUTION :-

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Bootstrap Grid Layout</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <style>
        .row {
            border: 1px solid #000;
            background-color: lightgreen;
            margin: 10px 0;
        }
    </style>
</head>
<body>
    <div class="container">
        <!-- First Row -->
        <div class="row">
            <div class="col-6">Column 1</div>
            <div class="col-6">Column 2</div>
        </div>
        <!-- Second Row -->
        <div class="row">
            <div class="col-4">Column 1</div>
            <div class="col-4">Column 2</div>
            <div class="col-4">Column 3</div>
        </div>
        <!-- Third Row -->
        <div class="row">
            <div class="col-sm-3">Column 1</div>
            <div class="col-sm-3">Column 2</div>
            <div class="col-sm-3">Column 3</div>
            <div class="col-sm-3">Column 4</div>
        </div>
        <!-- Fourth Row -->
        <div class="row">
            <div class="col-md-2">Column 1</div>
            <div class="col-md-2">Column 2</div>
            <div class="col-md-2">Column 3</div>
            <div class="col-md-2">Column 4</div>
            <div class="col-md-2">Column 5</div>
            <div class="col-md-2">Column 6</div>
        </div>
    </div>
</body>
```

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

Q2. Apply different Bootstrap background colors (e.g., bg-primary, bg-success, etc.) and text colors (e.g., text-white, text-dark, etc.) to each column created in Q1.

SOLUTION :-

```
<!-- Add appropriate classes to columns for colors -->
<div class="col-6 bg-primary text-white">Column 1</div>
<div class="col-6 bg-success text-dark">Column 2</div>
<div class="col-4 bg-danger text-white">Column 1</div>
<div class="col-4 bg-warning text-dark">Column 2</div>
<div class="col-4 bg-info text-dark">Column 3</div>
<!-- Continue applying classes for other columns... -->
```

Q3. Create a grid with three equal-sized columns, each containing an image styled as a thumbnail and set to a size of 200x200 pixels. Add a button that, when clicked, changes the thumbnail image style to a circular image.

SOLUTION :-

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Thumbnails</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <script src="https://code.jquery.com/jquery-3.6.4.min.js"></script>
</head>
<body>
    <div class="container text-center">
      <div class="row">
        <div class="col">
          <img src="image1.jpg" class="img-thumbnail" style="width: 200px; height: 200px;" id="img1">
        </div>
        <div class="col">
          <img src="image2.jpg" class="img-thumbnail" style="width: 200px; height: 200px;" id="img2">
        </div>
        <div class="col">
          <img src="image3.jpg" class="img-thumbnail" style="width: 200px; height: 200px;" id="img3">
        </div>
      </div>
      <button class="btn btn-primary mt-3" id="changeStyle">Change to Circular</button>
    </div>
    <script>
      $('#changeStyle').click(function() {
        $('.img-thumbnail').removeClass('img-thumbnail').addClass('rounded-circle');
      });
    </script>
</body>
</html>
```

Q4. Create six different types of alert boxes, each with an appropriate link, a closing button, and a suitable emphasized message. Add animated effects to each alert box with a 5-second transition effect.

SOLUTION :-

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Alerts</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
    <style>
        .alert {
            transition: opacity 5s ease;
        }
    </style>
</head>
<body>
    <div class="container mt-3">
        <div class="alert alert-primary">
            This is a primary alert! <a href="#" class="alert-link">Read more</a>
            <button type="button" class="btn-close" data-bs-dismiss="alert"></button>
        </div>
        <div class="alert alert-success">
            This is a success alert! <a href="#" class="alert-link">Read more</a>
            <button type="button" class="btn-close" data-bs-dismiss="alert"></button>
        </div>
        <!-- Add more alerts for other types... -->
    </div>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

Q5. Create a nested dropdown menu with multiple levels.
The button group should have four primary categories, such as 'Category 1', 'Category 2', etc., with each category containing four subcategories, such as 'Subcategory 1', 'Subcategory 2', etc. Implement the structure using <div> elements with the class btn-group for the categories. Include dropdowns for each subcategory using the class dropdown-toggle and dropdown-menu. The dropdown items should be links (<a>) with the class dropdown-item for each option.

SOLUTION :-

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Nested Dropdown Menu</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
```

```
</head>
<body>
   <div class="container mt-5">
      <div class="btn-group">
         <button type="button" class="btn btn-primary dropdown-toggle" data-bs-toggle="dropdown" aria-expanded="false">
            Category 1
         </button>
         <ul class="dropdown-menu">
            <li><a class="dropdown-item" href="#">Subcategory 1</a></li>
            <li><a class="dropdown-item" href="#">Subcategory 2</a></li>
            <li><a class="dropdown-item" href="#">Subcategory 3</a></li>
            <li><a class="dropdown-item" href="#">Subcategory 4</a></li>
         </ul>
      </div>
      <!-- Repeat for other categories -->
   </div>
   <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

Q6. Create a webpage with four animated progress bars using Bootstrap, applying the progress-bar-striped and progress-bar-animated classes, each with a different background color. The progress bars should initially be hidden and only appear when the user clicks the 'Upload File' button. Implement a function that gradually increases the width of each progress bar from 0% to 100%, with a 1% increment every 100 milliseconds. Use jQuery to control the display and animation of the progress bars, ensuring they fill sequentially.

SOLUTION :-

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Progress Bars</title>
   <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
   <script src="https://code.jquery.com/jquery-3.6.4.min.js"></script>
</head>
<body>
   <div class="container mt-5">
      <button class="btn btn-primary mb-3" id="uploadBtn">Upload File</button>
      <div class="progress mb-2" style="display: none;">
         <div class="progress-bar progress-bar-striped progress-bar-animated bg-primary" role="progressbar" style="width:
0%;"></div>
      </div>
      <div class="progress mb-2" style="display: none;">
         <div class="progress-bar progress-bar-striped progress-bar-animated bg-success" role="progressbar" style="width:
0%;"></div>
      </div>
      <div class="progress mb-2" style="display: none;">
         <div class="progress-bar progress-bar-striped progress-bar-animated bg-danger" role="progressbar" style="width:
0%;"></div>
      </div>
      <div class="progress mb-2" style="display: none;">
```

```
            <div class="progress-bar progress-bar-striped progress-bar-animated bg-warning" role="progressbar" style="width:
0%;"></div>
        </div>
    </div>
    <script>
        $('#uploadBtn').click(function() {
            $('.progress').show();
            let bars = $('.progress-bar');
            bars.each(function(index) {
                let bar = $(this);
                let width = 0;
                let interval = setInterval(() => {
                    if (width >= 100) {
                        clearInterval(interval);
                    } else {
                        width++;
                        bar.css('width', width + '%');
                    }
                }, 100);
            });
        });
    </script>
</body>
</html>
```

Q7. Create four HTML pages, each containing a Bootstrap header with a color class of your
choice and centered alignment. Add pagination to each page, linking them to the
corresponding HTML pages. Use the proper attribute to open the page in a new blank
tab. Ensure that the active class changes to reflect the current page.

SOLUTION :-

page1.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Page 1</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
    <header class="text-center bg-primary text-white py-3">
        <h1>Page 1</h1>
    </header>
    <div class="container mt-5">
        <nav>
            <ul class="pagination justify-content-center">
                <li class="page-item active"><a class="page-link" href="page1.html" target="_blank">1</a></li>
                <li class="page-item"><a class="page-link" href="page2.html" target="_blank">2</a></li>
                <li class="page-item"><a class="page-link" href="page3.html" target="_blank">3</a></li>
                <li class="page-item"><a class="page-link" href="page4.html" target="_blank">4</a></li>
            </ul>
```

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

Page2.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Page 2</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
    <header class="text-center bg-success text-white py-3">
      <h1>Page 2</h1>
    </header>
    <div class="container mt-5">
      <nav>
        <ul class="pagination justify-content-center">
          <li class="page-item"><a class="page-link" href="page1.html" target="_blank">1</a></li>
          <li class="page-item active"><a class="page-link" href="page2.html" target="_blank">2</a></li>
          <li class="page-item"><a class="page-link" href="page3.html" target="_blank">3</a></li>
          <li class="page-item"><a class="page-link" href="page4.html" target="_blank">4</a></li>
        </ul>
      </nav>
    </div>
</body>
</html>
```

Q8. Design a tutorial webpage for HTML using the following Bootstrap components:
jumbotron, navbar, nav tabs, nav pills, and pagination.
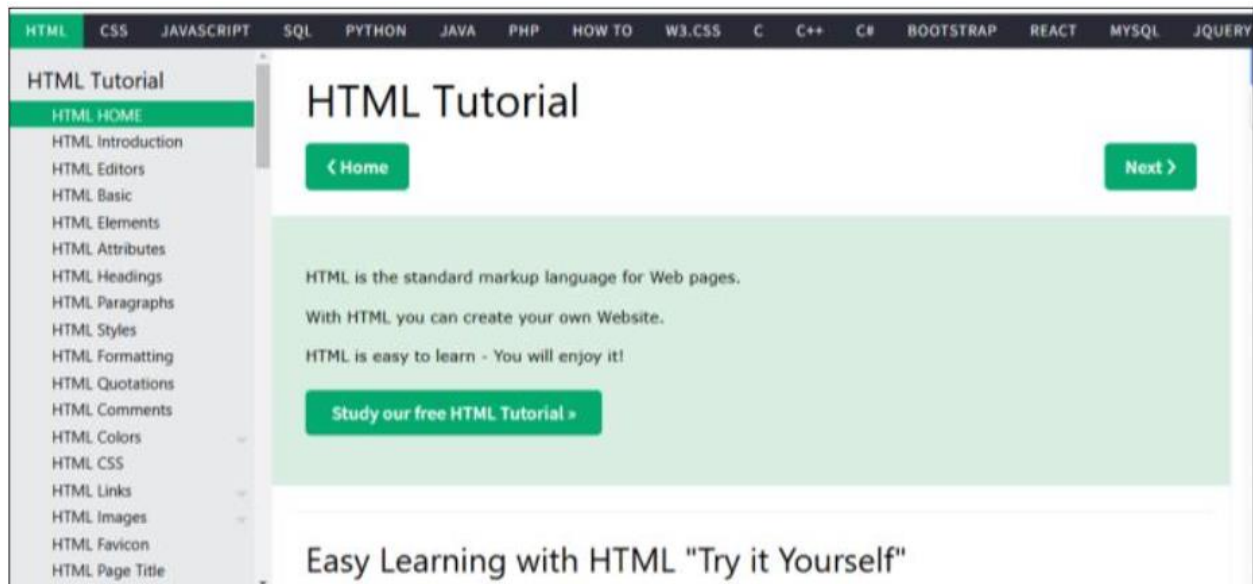
SOLUTION :-

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Tutorial</title>
  <!-- Bootstrap CSS -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>


<!-- Navbar -->
<nav class="navbar navbar-expand-lg navbar-light bg-light">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">HTML Tutorial</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarNav">
      <ul class="navbar-nav">
        <li class="nav-item">
          <a class="nav-link active" href="#">Home</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#chapters">Chapters</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#examples">Examples</a>
        </li>
      </ul>
    </div>
  </div>
</nav>


<!-- Jumbotron -->
<div class="jumbotron text-center bg-primary text-white py-5">
  <div class="container">
    <h1>Welcome to HTML Tutorial</h1>
    <p>Learn the basics and advanced topics of HTML in one place!</p>
  </div>
</div>


<!-- Nav Tabs -->
<div class="container my-5">
  <ul class="nav nav-tabs" id="tutorialTabs" role="tablist">
    <li class="nav-item">
      <a class="nav-link active" id="introduction-tab" data-bs-toggle="tab" href="#introduction" role="tab">Introduction</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" id="syntax-tab" data-bs-toggle="tab" href="#syntax" role="tab">HTML Syntax</a>
```

```html
        </li>
        <li class="nav-item">
          <a class="nav-link" id="examples-tab" data-bs-toggle="tab" href="#examples" role="tab">Examples</a>
        </li>
      </ul>
      <div class="tab-content mt-4" id="tutorialTabsContent">
        <div class="tab-pane fade show active" id="introduction" role="tabpanel">
          <h3>Introduction</h3>
          <p>HTML is the standard markup language for creating web pages.</p>
        </div>
        <div class="tab-pane fade" id="syntax" role="tabpanel">
          <h3>HTML Syntax</h3>
          <p>HTML elements are represented by tags.</p>
        </div>
        <div class="tab-pane fade" id="examples" role="tabpanel">
          <h3>Examples</h3>
          <p>Explore various examples to understand HTML better.</p>
        </div>
      </div>
    </div>


    <!-- Nav Pills -->
    <div class="container my-5">
      <ul class="nav nav-pills">
        <li class="nav-item">
          <a class="nav-link active" href="#basic">Basic</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#advanced">Advanced</a>
        </li>
      </ul>
    </div>


    <!-- Pagination -->
    <div class="container text-center mt-5">
      <nav aria-label="Page navigation">
        <ul class="pagination justify-content-center">
          <li class="page-item disabled">
            <a class="page-link" href="#" tabindex="-1">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>
      </nav>
    </div>


    <!-- Bootstrap JS -->
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

Q9. Design a New Year card gallery using Bootstrap cards. Each card should include a description, an image, and a link at the bottom, as shown below. You may add additional properties to enhance the appearance and create a visually appealing design.
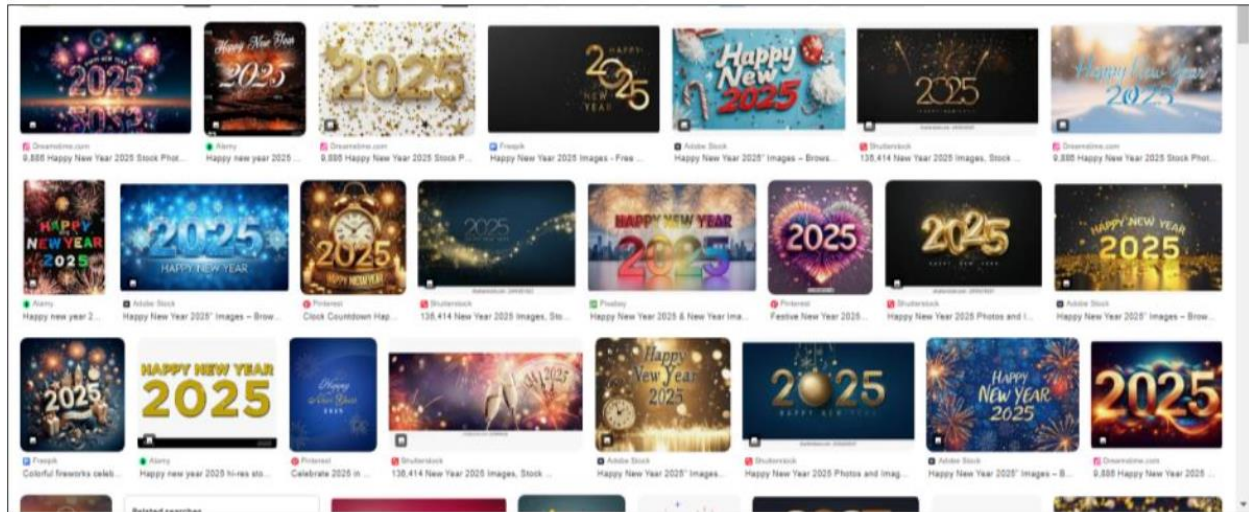
SOLUTION :-

```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>New Year Card Gallery</title>
 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
 <style>
  body {
   background-color: #f8f9fa;
  }
  .card img {
   height: 200px;
   object-fit: cover;
  }
  .card-title {
   font-size: 1.2rem;
   font-weight: bold;
  }
  .card-text {
   font-size: 0.9rem;
  }
  .card-link {
   font-weight: bold;
   color: #007bff;
  }
  .card-link:hover {
   text-decoration: underline;
```

```html
    }
  </style>
</head>
<body>
  <div class="container py-5">
    <h1 class="text-center mb-5">Happy New Year 2025 Card Gallery</h1>
    <div class="row row-cols-1 row-cols-md-3 g-4">
      <!-- Card 1 -->
      <div class="col">
        <div class="card">
          <img src="#" class="card-img-top" alt="New Year 2025 Card 1">
          <div class="card-body">
            <h5 class="card-title">Celebrate New Beginnings</h5>
            <p class="card-text">Step into 2025 with joy and prosperity. Embrace the new opportunities that await!</p>
            <a href="#" class="card-link">View More</a>
          </div>
        </div>
      </div>
      <!-- Card 2 -->
      <div class="col">
        <div class="card">
          <img src="#" class="card-img-top" alt="New Year 2025 Card 2">
          <div class="card-body">
            <h5 class="card-title">Countdown to Joy</h5>
            <p class="card-text">As the clock strikes midnight, welcome the New Year with laughter and dreams!</p>
            <a href="#" class="card-link">View More</a>
          </div>
        </div>
      </div>
      <!-- Card 3 -->
      <div class="col">
        <div class="card">
          <img src="#" class="card-img-top" alt="New Year 2025 Card 3">
          <div class="card-body">
            <h5 class="card-title">Shine Brighter</h5>
            <p class="card-text">Let 2025 be the year you achieve all your goals and shine like never before.</p>
            <a href="#" class="card-link">View More</a>
          </div>
        </div>
      </div>
      <!-- Card 4 -->
      <div class="col">
        <div class="card">
          <img src="#" class="card-img-top" alt="New Year 2025 Card 4">
          <div class="card-body">
            <h5 class="card-title">Wishing Prosperity</h5>
            <p class="card-text">May your 2025 be filled with health, wealth, and happiness!</p>
            <a href="#" class="card-link">View More</a>
          </div>
        </div>
      </div>
      <!-- Card 5 -->
      <div class="col">
        <div class="card">
          <img src="#" class="card-img-top" alt="New Year 2025 Card 5">
```

```html
      <div class="card-body">
        <h5 class="card-title">A Fresh Start</h5>
        <p class="card-text">Begin 2025 with renewed enthusiasm and a heart full of hope!</p>
        <a href="#" class="card-link">View More</a>
      </div>
    </div>
   </div>
  </div>
 </div>


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

Q10. Design a slideshow featuring five historical monuments of India, including captions
and descriptions for each, using a Bootstrap carousel.

SOLUTION :-

```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Historical Monuments Carousel</title>
 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
 <div class="container py-5">
  <h1 class="text-center mb-4">Historical Monuments of India</h1>
  <div id="monumentsCarousel" class="carousel slide" data-bs-ride="carousel">
   <div class="carousel-inner">
    <!-- Slide 1 -->
    <div class="carousel-item active">
     <img src="#" class="d-block w-100" alt="Taj Mahal">
     <div class="carousel-caption d-none d-md-block">
      <h5>Taj Mahal</h5>
      <p>An iconic symbol of love, built by Emperor Shah Jahan in Agra.</p>
     </div>
    </div>
    <!-- Slide 2 -->
    <div class="carousel-item">
     <img src="#" class="d-block w-100" alt="Qutub Minar">
     <div class="carousel-caption d-none d-md-block">
      <h5>Qutub Minar</h5>
      <p>A UNESCO World Heritage Site and the tallest brick minaret in the world.</p>
     </div>
    </div>
    <!-- Slide 3 -->
    <div class="carousel-item">
     <img src="#" class="d-block w-100" alt="Red Fort">
     <div class="carousel-caption d-none d-md-block">
      <h5>Red Fort</h5>
      <p>A symbol of India's independence and the residence of Mughal emperors.</p>
```

```
        </div>
      </div>
      <!-- Slide 4 -->
      <div class="carousel-item">
        <img src="#l" class="d-block w-100" alt="Hawa Mahal">
        <div class="carousel-caption d-none d-md-block">
          <h5>Hawa Mahal</h5>
          <p>The Palace of Winds in Jaipur, known for its unique architecture.</p>
        </div>
      </div>
      <!-- Slide 5 -->
      <div class="carousel-item">
        <img src="#" class="d-block w-100" alt="Gateway of India">
        <div class="carousel-caption d-none d-md-block">
          <h5>Gateway of India</h5>
          <p>A historic arch-monument in Mumbai built during British rule.</p>
        </div>
      </div>
    </div>
    <button class="carousel-control-prev" type="button" data-bs-target="#monumentsCarousel" data-bs-slide="prev">
      <span class="carousel-control-prev-icon" aria-hidden="true"></span>
      <span class="visually-hidden">Previous</span>
    </button>
    <button class="carousel-control-next" type="button" data-bs-target="#monumentsCarousel" data-bs-slide="next">
      <span class="carousel-control-next-icon" aria-hidden="true"></span>
      <span class="visually-hidden">Next</span>
    </button>
  </div>
 </div>
 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

Q11. Design a stacked form with appropriate input fields to capture data, including fields for registration number, email, password, gender, and a submit button.

SOLUTION :-

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Stacked Form</title>
 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
 <div class="container py-5">
  <h1 class="text-center mb-4">Registration Form</h1>
  <form class="p-4 border rounded bg-light">
    <!-- Registration Number -->
    <div class="mb-3">
      <label for="regNumber" class="form-label">Registration Number</label>
      <input type="text" class="form-control" id="regNumber" placeholder="Enter your registration number" required>
```

```html
    </div>
    <!-- Email -->
    <div class="mb-3">
      <label for="email" class="form-label">Email</label>
      <input type="email" class="form-control" id="email" placeholder="Enter your email" required>
    </div>
    <!-- Password -->
    <div class="mb-3">
      <label for="password" class="form-label">Password</label>
      <input type="password" class="form-control" id="password" placeholder="Enter your password" required>
    </div>
    <!-- Gender -->
    <div class="mb-3">
      <label class="form-label">Gender</label>
      <div>
        <input type="radio" class="form-check-input" name="gender" id="male" value="Male" required>
        <label for="male" class="form-check-label">Male</label>
      </div>
      <div>
        <input type="radio" class="form-check-input" name="gender" id="female" value="Female" required>
        <label for="female" class="form-check-label">Female</label>
      </div>
    </div>
    <!-- Submit Button -->
    <button type="submit" class="btn btn-primary w-100">Submit</button>
  </form>
 </div>
 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```