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Internet Programming

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Experiment No.: 5

Title:

Design a web pages using Bootstrap

Problem Definition:

Design web pages using Bootstrap framework implementing Grid system, Forms, Buttons, and Navbar.

Pre-requisites:

1. Understanding of HTML5 and CSS3 basics
2. Basic knowledge of responsive design concepts
3. Familiarity with Bootstrap framework structure
4. A text editor or IDE and a modern web browser
5. Internet connection to include Bootstrap CDN or downloaded Bootstrap files

Theory:

Bootstrap is a popular front-end open-source framework used for developing responsive and mobile-first web pages. It provides pre-styled components and a grid system for easier design and faster development.

Key Bootstrap Features used in this experiment:

- Grid System: Bootstrap uses a 12-column grid system with responsive breakpoints (xs, sm, md, lg, xl) to create layouts.
- Forms: Pre-styled form elements such as input fields, checkboxes, radio buttons, and validation classes.
- Buttons: Various button classes like btn, btn-primary, btn-success, btn-danger, and customization options.

- Navbar: Responsive navigation bar with support for branding, links, dropdowns, and toggler for smaller screens.

Procedure:

1. Create a new HTML file and include Bootstrap via CDN in the <head> section.
2. Implement the Bootstrap grid system using <div class='container'>, <div class='row'>, and <div class='col'> classes.
3. Add form elements styled with Bootstrap classes (form-control, form-group, etc.).
4. Insert buttons using predefined classes like btn btn-primary and customize their appearance.
5. Create a responsive navigation bar using <nav class='navbar'> and related classes.
6. Test the webpage in a browser and resize the window to verify responsiveness.
7. Refine the design and ensure all components are functioning correctly.
8. Save final files and capture screenshots of the results.

Program:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Bootstrap Example Page</title>
    <link
      href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.c
ss"
      rel="stylesheet"
    />
  </head>
  <body>
    <nav class="navbar navbar-expand-lg navbar-dark bg-primary">
      <div class="container">
        <a class="navbar-brand" href="#">MyWebsite</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 justify-content-end" 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="#">Features</a></li>
            <li class="nav-item"><a class="nav-link" href="#">Pricing</a></li>
            <li class="nav-item"><a class="nav-link" href="#">Contact</a></li>
          </ul>
        </div>
      </div>
    </nav>

    <div class="container mt-5">
      <div class="row g-4">
        <div class="col-md-8">
          <h2 class="mb-3">Welcome to My Page</h2>
```

```
<p class="mb-4">
```

This page demonstrates the usage of Bootstrap Grid System, Navbar, Forms, and Buttons.

```
</p>
```

```
<div class="row g-3">
```

```
<div class="col-md-6">
```

```
<div class="p-4 bg-light border text-center rounded">Column 1</div>
```

```
</div>
```

```
<div class="col-md-6">
```

```
<div class="p-4 bg-secondary text-white border text-center rounded">
```

Column 2

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<div class="col-md-4">
```

```
<div class="card shadow">
```

```
<div class="card-body">
```

```
<h5 class="card-title text-center mb-4">Sign Up Form</h5>
```

```
<form>
```

```
<div class="mb-3">
```

```
<label for="username" class="form-label">Username</label>
```

```
<input
```

```
  type="text"
```

```
  class="form-control"
```

```
  id="username"
```

```
  placeholder="Enter username"
```

```
</div>
```

```
<div class="mb-3">
```

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

```
<input
```

```
  type="email"
```

```
  class="form-control"
```

```
  id="email"
```

```
  placeholder="Enter email"
```

```
</div>
```

```
<div class="mb-3">
```

```
<label for="password" class="form-label">Password</label>
```

```

        <input
            type="password"
            class="form-control"
            id="password"
            placeholder="Enter password"
        />
    </div>
    <div class="d-flex justify-content-between">
        <button type="submit" class="btn btn-primary w-50 me-
2">Submit</button>
        <button type="reset" class="btn btn-danger w-50">Reset</button>
    </div>
</form>
</div>
</div>
</div>
</div>
</div>
</div>

<footer class="bg-primary text-white text-center py-3 mt-5">
    <p class="mb-0">&copy; 2025 MyWebsite. All rights reserved.</p>
</footer>

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

```

Output:

The screenshot displays a web page layout using the Bootstrap Grid system. At the top, a blue navigation bar contains the site name 'MyWebsite' on the left and a list of links ('Home', 'Features', 'Pricing', 'Contact') on the right. The main content area is divided into two columns: 'Column 1' (light gray) and 'Column 2' (dark gray). Column 1 features a 'Welcome to My Page' heading followed by a subtext line: 'This page demonstrates the usage of Bootstrap Grid System, Navbar, Forms, and Buttons.' Column 2 contains a 'Sign Up Form' with three input fields labeled 'Username', 'Email address', and 'Password', each with a placeholder text 'Enter username', 'Enter email', and 'Enter password' respectively. Below the inputs are two buttons: a blue 'Submit' button and a red 'Reset' button. A blue footer bar at the bottom contains the copyright notice '© 2025 MyWebsite. All rights reserved.'

Results:

Successfully created responsive web pages using Bootstrap Grid system, Forms, Buttons, and Navbar.

References:

1. <https://getbootstrap.com/>
2. <https://www.w3schools.com/bootstrap/>
3. https://developer.mozilla.org/en-US/docs/Learn/CSS/CSS_layout/Responsive_Design