

Lab 03

Designing Responsive page layout using DIV/Bootstrap

Objective:

To familiarize the students with the use of Div's and the use of CSS/Bootstrap for designing responsive page layout.

Activity Outcomes:

After this lab, the students should be able to

- use the DIV tag
- the use of CSS for page layout designing
- Design Responsive page layout
- Use of Bootstrap

Instructor Note:

As pre-lab activity, read Chapter 4 from the textbook “Web Design Playground: HTML & CSS the Interactive Way 1st Edition, April 2019 by Paul McFedries”.

1) Useful Concepts

The div tag is used to define a division or section in an HTML document. It visually, allows us to make containers that can be formatted. It can be declared as: <div>.....</div>. We use div and CSS to design a page layout. The div tag is used to represent sections in a page and CSS is used to style these sections. We can describe the process of designing a page as

- Determine the requirements of the site
- Group the required information
- Make a site map
- Identify key elements for each page
- Decide about the arrangement of information on each page
- Translate the design into code

Using Bootstrap:

CDN:

<https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css>

<https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.min.js>

Bootstrap comes with different elements and grid system that helps in responsive web design. We will go through few elements here.

2) Solved Lab Activities

<i>Sr. No</i>	<i>Allocated Time</i>	<i>Level of Complexity</i>	<i>CLO Mapping</i>
Activity 1	30 Minutes	Medium	CLO-4
Activity 2	30 Minutes	Medium	CLO-4
Activity 3	30 Minutes	Medium	CLO-4

Activity 1:

Use div and CSS properties to design a responsive form that contains First name, Last Name, Country (dropdown), Subject and submit button.

Solution:

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
* {
  box-sizing: border-box;
}

input[type=text], select, textarea {
  width: 100%;
  padding: 12px;
  border: 1px solid #ccc;
  border-radius: 4px;
  resize: vertical;
}

label {
  padding: 12px 12px 12px 0;
  display: inline-block;
}

input[type=submit] {
  background-color: #04AA6D;
  color: white;
  padding: 12px 20px;
  border: none;
  border-radius: 4px;
  cursor: pointer;
  float: right;
}

input[type=submit]:hover {
  background-color: #45a049;
```

```

}

.container {
  border-radius: 5px;
  background-color: #f2f2f2;
  padding: 20px;
}

.col-25 {
  float: left;
  width: 25%;
  margin-top: 6px;
}

.col-75 {
  float: left;
  width: 75%;
  margin-top: 6px;
}

/* Clear floats after the columns */
.row:after {
  content: "";
  display: table;
  clear: both;
}

/* Responsive layout - when the screen is less than 600px wide, make
the two columns stack on top of each other instead of next to each
other */
@media screen and (max-width: 600px) {
  .col-25, .col-75, input[type=submit] {
    width: 100%;
    margin-top: 0;
  }
}
</style>
</head>
<body>

<h2>Responsive Form</h2>
<p>Resize the browser window to see the effect. When the screen is
less than 600px wide, make the two columns stack on top of each other
instead of next to each other.</p>

<div class="container">
  <form action="/action_page.php">
    <div class="row">

```

```

        <div class="col-25">
            <label for="fname">First Name</label>
        </div>
        <div class="col-75">
            <input type="text" id="fname" name="firstname"
placeholder="Your name..">
        </div>
    </div>
    <div class="row">
        <div class="col-25">
            <label for="lname">Last Name</label>
        </div>
        <div class="col-75">
            <input type="text" id="lname" name="lastname"
placeholder="Your last name..">
        </div>
    </div>
    <div class="row">
        <div class="col-25">
            <label for="country">Country</label>
        </div>
        <div class="col-75">
            <select id="country" name="country">
                <option value="Pakistan">Pakistan</option>
                <option value="Canada">Canada</option>
                <option value="usa">USA</option>
            </select>
        </div>
    </div>
    <div class="row">
        <div class="col-25">
            <label for="subject">Subject</label>
        </div>
        <div class="col-75">
            <textarea id="subject" name="subject" placeholder="Write
something.." style="height:200px"></textarea>
        </div>
    </div>
    <div class="row">
        <input type="submit" value="Submit">
    </div>
</form>
</div>

</body>
</html>

```

Output:

Responsive Form

Resize the browser window to see the effect. When the screen is less than 600px wide, make the two columns stack on top of each other instead of next to each other.

First Name	<input type="text" value="Your name.."/>
Last Name	<input type="text" value="Your last name.."/>
Country	<input type="text" value="Pakistan"/>
Subject	<div><div>Write something..</div></div>

Submit

Activity 2:

Use div and CSS properties to design a page layout that contains

- *a header section to display the title, style this title with CSS*
- *a form container that contains a registration form, use CSS to style the elements of the form*
- *a footer section*

Solution:

```
External CSS
body {
background-color: lightblue;
}
h1 {
color: navy; margin-left: 20px; font-family: verdana;
font-size: 50px;
}
#para1 {
text-align: center; color: red;
```

```

}
.center {
text-align: center; color: yellow;
}
<html>
<head>
<title>Using divs</title>
</head>
<body>
  <div>
<div style="width:100px;background-color:gray">First</div>
<div style="width:100px;background-color:red">second</div>
</div>
</body>
</html>

```

```

<!DOCTYPE html>
<html>
<style>
body {font-family: Arial, Helvetica, sans-serif;}
* {box-sizing: border-box}

/* Full-width input fields */
input[type=text], input[type=password] {
  width: 100%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}

input[type=text]:focus, input[type=password]:focus {
  background-color: #ddd;
  outline: none;
}

hr {
  border: 1px solid #f1f1f1;
  margin-bottom: 25px;
}

/* Set a style for all buttons */
button {
  background-color: #04AA6D;
  color: white;

```

```

padding: 14px 20px;
margin: 8px 0;
border: none;
cursor: pointer;
width: 100%;
opacity: 0.9;
}

button:hover {
    opacity: 1;
}

/* Extra styles for the cancel button */
.cancelbtn {
    padding: 14px 20px;
    background-color: #f44336;
}

/* Float cancel and signup buttons and add an equal width */
.cancelbtn, .signupbtn {
    float: left;
    width: 50%;
}

/* Add padding to container elements */
.container {
    padding: 16px;
}

/* Clear floats */
.clearfix::after {
    content: "";
    clear: both;
    display: table;
}

/* Change styles for cancel button and signup button on extra small screens */
@media screen and (max-width: 300px) {
    .cancelbtn, .signupbtn {
        width: 100%;
    }
}
</style>
<body>

<form action="/action_page.php" style="border: 1px solid #ccc">

```

```

<div class="container">
  <h1>Sign Up</h1>
  <p>Please fill in this form to create an account.</p>
  <hr>

  <label for="email"><b>Email</b></label>
  <input type="text" placeholder="Enter Email" name="email"
required>

  <label for="psw"><b>Password</b></label>
  <input type="password" placeholder="Enter Password" name="psw"
required>

  <label for="psw-repeat"><b>Repeat Password</b></label>
  <input type="password" placeholder="Repeat Password" name="psw-
repeat" required>

  <label>
    <input type="checkbox" checked="checked" name="remember"
style="margin-bottom:15px"> Remember me
  </label>

  <p>By creating an account you agree to our <a href="#"
style="color:dodgerblue">Terms & Privacy</a>.</p>

  <div class="clearfix">
    <button type="button" class="cancelbtn">Cancel</button>
    <button type="submit" class="signupbtn">Sign Up</button>
  </div>
</div>
</form>

</body>
</html>

```

Output:



Activity 3:

Use bootstrap to design a page layout that contains

- *a drop down menu*
- *use of different types of buttons*

Solution:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-
beta.2/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js
"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.6/umd/popp
er.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-
beta.2/js/bootstrap.min.js"></script>
```

```

</head>
<body>

<div class="container">
  <h2>Dropdown Split Buttons Example</h2>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Primary</button>
    <button type="button" class="btn btn-primary dropdown-toggle
dropdown-toggle-split" data-toggle="dropdown">
      <span class="caret"></span>
    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>

  <div class="btn-group">
    <button type="button" class="btn btn-
secondary">Secondary</button>
    <button type="button" class="btn btn-secondary dropdown-toggle
dropdown-toggle-split" data-toggle="dropdown">
      <span class="caret"></span>
    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>

  <div class="btn-group">
    <button type="button" class="btn btn-success">Success</button>
    <button type="button" class="btn btn-success dropdown-toggle
dropdown-toggle-split" data-toggle="dropdown">
      <span class="caret"></span>
    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>

  <div class="btn-group">
    <button type="button" class="btn btn-info">Info</button>
    <button type="button" class="btn btn-info dropdown-toggle
dropdown-toggle-split" data-toggle="dropdown">
      <span class="caret"></span>

```

```

    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>

  <div class="btn-group">
    <button type="button" class="btn btn-warning">Warning</button>
    <button type="button" class="btn btn-warning dropdown-toggle
dropdown-toggle-split" data-toggle="dropdown">
      <span class="caret"></span>
    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>

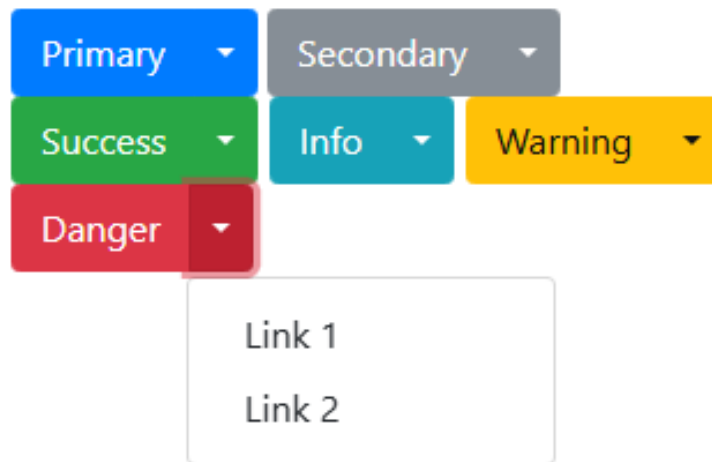
  <div class="btn-group">
    <button type="button" class="btn btn-danger">Danger</button>
    <button type="button" class="btn btn-danger dropdown-toggle
dropdown-toggle-split" data-toggle="dropdown">
      <span class="caret"></span>
    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>
</div>

</body>
</html>

```

Output:

Dropdown Split Buttons Example



3) Graded Lab Tasks

Note: The instructor can design graded lab activities according to the level of difficult and complexity of the solved lab activities. The lab tasks assigned by the instructor should be evaluated in the same lab.

Lab Task 1

Design the web template given below using tables and external CSS

