

## Bootstrap

Bootstrap is one of the most used frameworks used as front-end development. It is a framework that contains predefined CSS code. It is a framework that makes web development easy access from a mobile device too. It delivers a ready-made pattern for grids, components, and utilities. The version of Bootstrap er are using is Bootstrap 5. The framework is free to use and can be used in 2 different ways (downloading a file for including libraries in a project or directly mentioning the URL for using the online version).

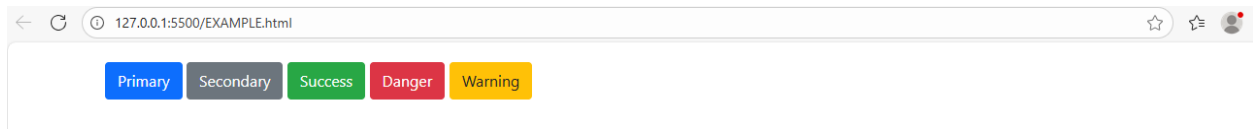
### *Reason for using Bootstrap:*

- Uses predefined style components which makes it faster.
- Works on a landscape device to a portrait-oriented mobile device.
- Works on a grid system for organization and responsive page layouts.
- Facilitates predefined components and designs for direct embedding.

### *Sample code using syntax:*

```
EXAMPLE.html
EXAMPLE.html > html
1  </head>
2  <!DOCTYPE html>
3  <html>
4
5  <head>
6    <title>
7      Bootstrap 5 | Subash Adhikari - bi95gn
8    </title>
9    <!-- Load Bootstrap -->
10   <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/css/bootstrap.min.css"
11     integrity="sha384-r4Nyp46KrjD5tp8YUzmLA05oM1iAEQ17CSuDqnUK2+k9luXQOfXJCJ4I" crossorigin="anonymous">
12 </head>
13
14 <body>
15   <div style="text-align: center; width: 600px;"></div>
16   <div style="width: 600px; height: 200px;
17     margin: 20px; text-align: center;">
18     <button type="button" class="btn btn-primary">
19       Primary
20     </button>
21     <button type="button" class="btn btn-secondary">
22       Secondary
23     </button>
24     <button type="button" class="btn btn-success">
25       Success
26     </button>
27     <button type="button" class="btn btn-danger">
28       Danger
29     </button>
30     <button type="button" class="btn btn-warning">
31       Warning
32     </button>
33   </div>
34 </body>
35
36 </html>
```

Figure 1 Sample code of Bootstrap



### Some of the key elements of Bootstrap:

- container / container-fluid gives fixed / full width while building the layout
- row creates a horizontal row group.
- col create responsive column (col-4, col-6)
- m- , p- Applying margin and padding (mt-3, p-2)
- h1 to h6 create responsive text
- text used to change text property
- list-group used to style group items
- table create responsive tables
- form-control Used in input, text areas and in checkboxes
- input-group creates an input which is combined with a button or text
- btn Give style to button
- navbar used to create a responsive navigation bar
- alert create a feedback message
- badge make label indicators
- modal used to create pop-up dialog boxes
- carousel used to create a slideshow with images and manage it
- dropdown creates interactive menus

### Example:

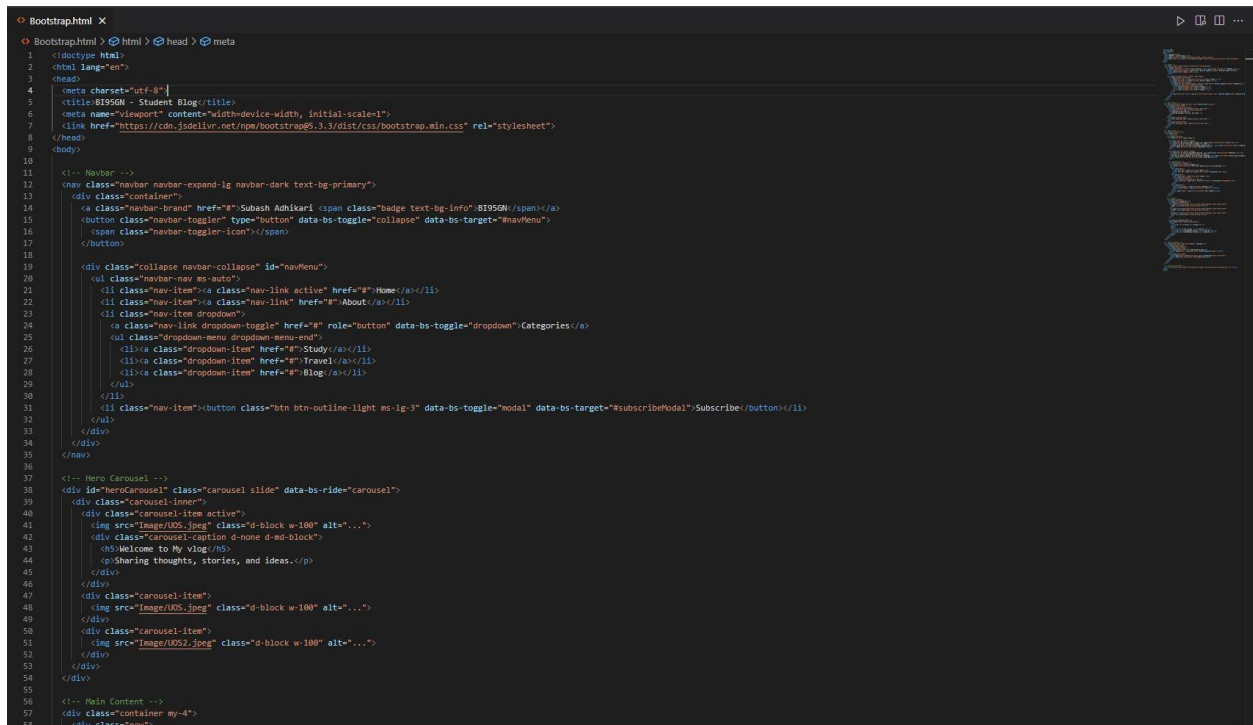


Figure 2: Screenshot of Bootstrap Example

```
Bootstrap.html X
Bootstrap.html > html > head > meta
2 <html lang="en">
9 <body>
57 <div class="container my-4">
58 <div class="row">
59 <!-- Blog Posts -->
60 <div class="col-md-8">
61 <h1 class="h2 mb-4">Latest Posts</h1>
62
63 <div class="mb-4 p-3 border rounded">
64 <h2 class="h3">My visit to ISM college <span class="badge text-bg-primary">Travel</span></h2>
65 <p class="text-muted">Published on August 23, 2025</p>
66 <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. <span class="text-success">This is highlighted text</span></p>
67 <button class="btn btn-sm btn-primary">Read More</button>
68 </div>
69
70 <div class="mb-4 p-3 border rounded">
71 <h2 class="h3">In time of Assignment Session <span class="badge text-bg-success">Reading</span></h2>
72 <p class="text-muted">Published on August 24, 2025</p>
73 <p>My name is Subash Adhikari with my canvas ID bi95gn <span class="text-danger">Enjoy doing assignment</span></p>
74 <button class="btn btn-sm btn-outline-primary">Read More</button>
75 </div>
76
77 <!-- Comment Form -->
78 <div id="comments" class="mt-5">
79 <h3 class="h4 mb-3">Leave a Comment</h3>
80 <div class="alert alert-info">Your email address will not be published.</div>
81 <form>
82 <div class="mb-3">
83 <label for="name" class="form-label">Name</label>
84 <input id="name" type="text" class="form-control" placeholder="Your name">
85 </div>
86 <div class="mb-3">
87 <label for="email" class="form-label">Email</label>
88 <div class="input-group">
89 <span class="input-group-text">@</span>
90 <input id="email" type="email" class="form-control" placeholder="example@mail.com">
91 </div>
92 </div>
93 <div class="mb-3">
94 <label for="comment" class="form-label">Comment</label>
95 <textarea id="comment" class="form-control" rows="3"></textarea>
96 </div>
97 <button type="submit" class="btn btn-primary">Post Comment</button>
98 </form>
99 </div>
100
101
102 <!-- Sidebar -->
103 <div class="col-md-4">
104 <h2 class="h3">Categories</h2>
105 <ul class="list-group mb-4">
106 <li class="list-group-item d-flex justify-content-between align-items-center">
107 <span>Study <span class="badge text-bg-primary">5</span>
108 </li>
109 <li class="list-group-item d-flex justify-content-between align-items-center">
110 <span>Travel <span class="badge text-bg-success">3</span>
111 </li>
112 <li class="list-group-item d-flex justify-content-between align-items-center">
```

Figure 3: Screenshot of Bootstrap Example

```
Bootstrap.html X
Bootstrap.html > html > head > meta
2 <html lang="en">
9 <body>
57 <div class="container my-4">
58 <div class="row">
101 <div class="col-md-4">
111 </li>
112 <li class="list-group-item d-flex justify-content-between align-items-center">
113 <span>Food <span class="badge text-bg-warning">2</span>
114 </li>
115 </ul>
116
117 <h2 class="h4">Recent Posts</h2>
118 <table class="table table-sm table-hover">
119 <thead>
120 <tr><th>#</th><th>Title</th><th>Date</th></tr>
121 </thead>
122 <tbody>
123 <tr><td>1</td><td>My College</td><td>Aug 23</td></tr>
124 <tr><td>2</td><td>Assignment Session</td><td>Aug 21</td></tr>
125 <tr><td>3</td><td>Refreshment Travel</td><td>Aug 20</td></tr>
126 </tbody>
127 </table>
128 </div>
129 </div>
130 </div>
131
132 <!-- Subscribe Modal -->
133 <div class="modal fade" id="subscribeModal" tabindex="-1">
134 <div class="modal-dialog">
135 <div class="modal-content">
136 <div class="modal-header">
137 <h1 class="modal-title">Subscribe to Blog</h1>
138 <button type="button" class="btn-close" data-bs-dismiss="modal"></button>
139 </div>
140 <div class="modal-body">
141 <input type="email" class="form-control mb-3" placeholder="Enter your email">
142 <button class="btn btn-primary w-100">Subscribe</button>
143 </div>
144 </div>
145 </div>
146 </div>
147
148 <!-- Bootstrap JS Bundle -->
149 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
150 </body>
151 </html>
152
```

Figure 4: Screenshot of Bootstrap Example

Output:

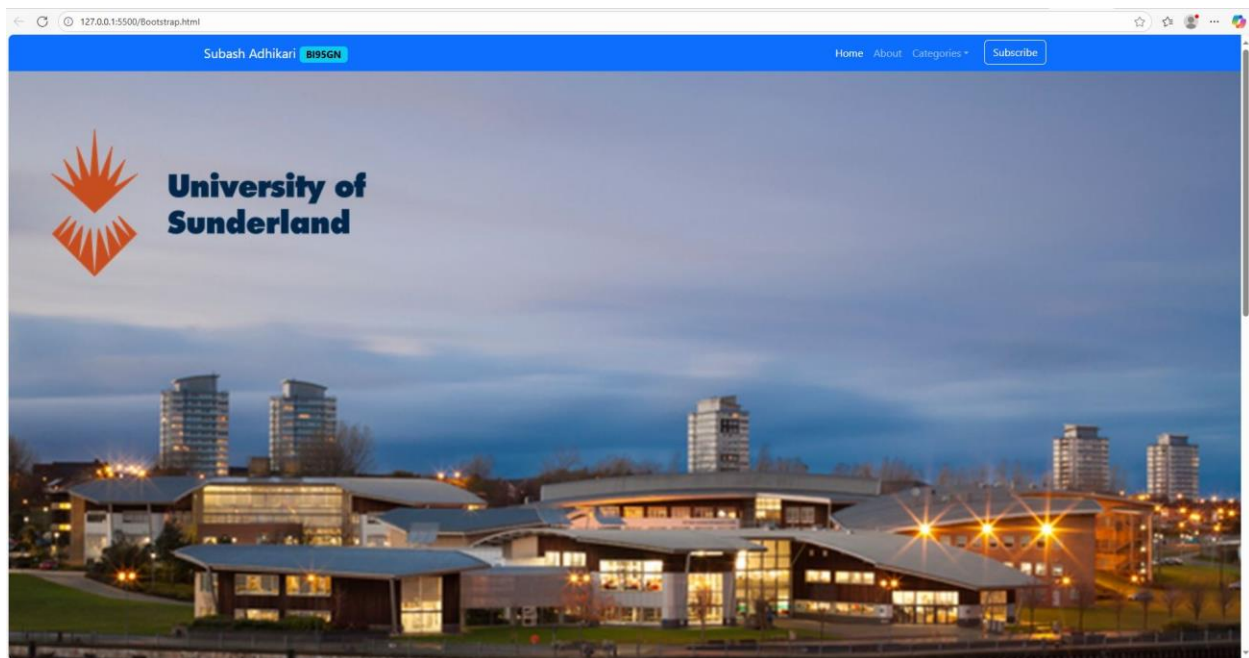


Figure 5.: Screenshot of Output

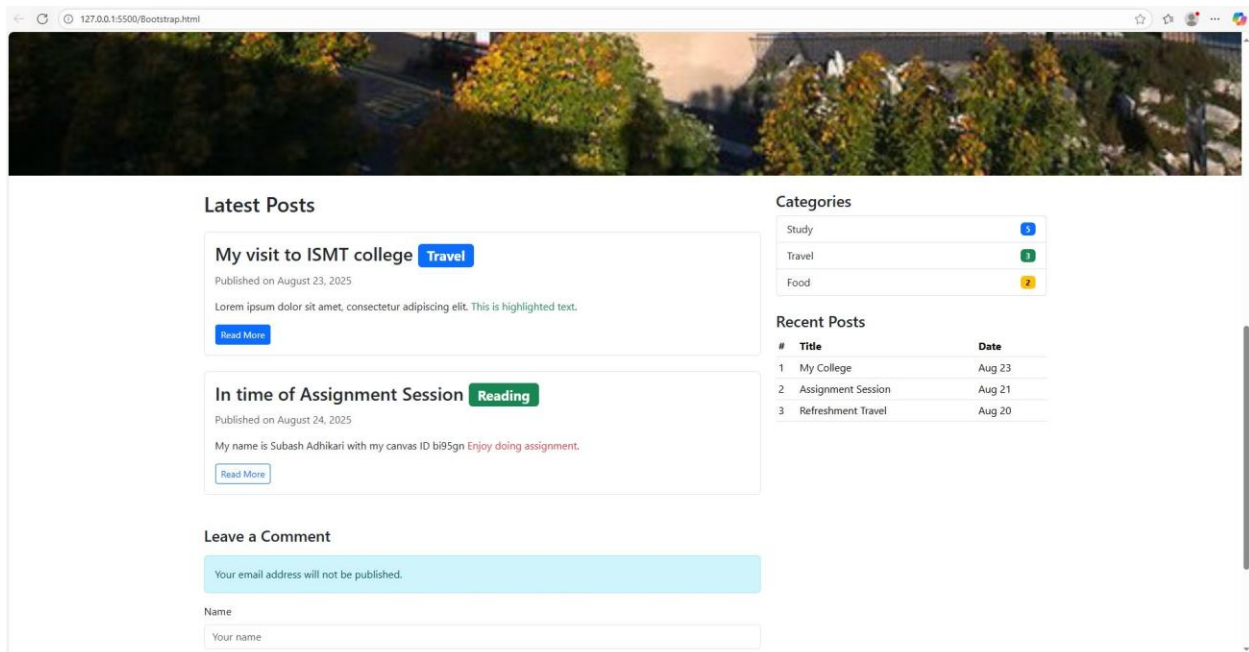


Figure 6: Screenshot of Output

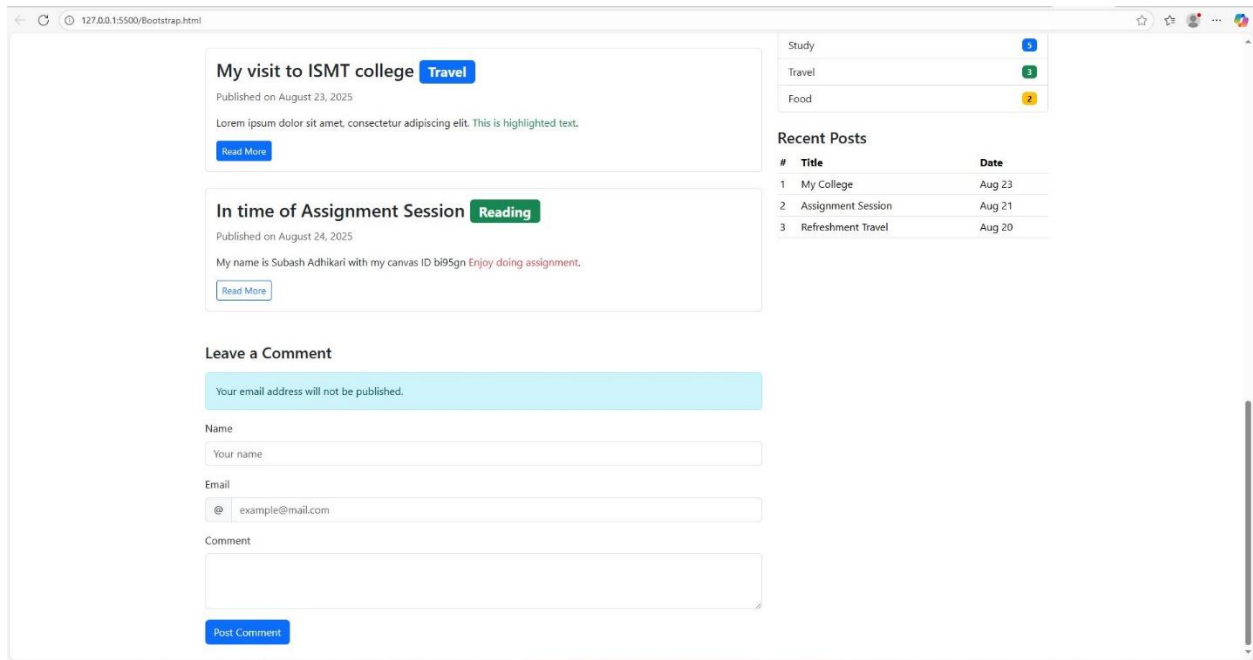


Figure 7: Screenshot of Output