



Program - BSc (Hons) Computer Systems Engineering (BSc.IT)

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MODULE CODE: CET138

MODULE TITLE: Full Stack Development

MODULE LEADER: David Grey

SUBMISSION DATE AND TIME: As stated in the assignment submission page on Canvas for this module

ASSIGNMENT: First Assignment

Academic Misconduct is an offence under university regulations, and this involves:

- **Plagiarism** – where you use information from another information source (including your previously submitted work) and pass it off as your own. This can be through direct copying, poor paraphrasing and/or absence of citations.
- **Collusion** – where you work too closely, intentionally, or unintentionally, with others to produce work that is similar in nature. This can be through loaning of materials, drafts or through unauthorised use of a fellow student's work.
- **Asking another person to write your assignment** – where you ask another individual or company to complete your work for you, be that paid or unpaid, and submit it as if it were your own.
- **Unauthorised use of artificial intelligence** – where you use artificial intelligence tools to generate your assignment instead of completing it yourself and/or where you have not been given permission to use artificial intelligence tools by your module leader. Please complete the following declaration around your use of artificial intelligence tools in your assignment.

STATEMENT ON USE OF ARTIFICIAL INTELLIGENCE TOOLS:

• I have used artificial intelligence tools to generate an idea for my assignment:	NO
• I have used artificial intelligence tools to write my assignment for me:	NO
• I have used artificial intelligence tools to brainstorm ideas for my assignment:	NO
• I have used artificial intelligence tools to correct my original assignment:	NO

DECLARATION

- I understand that by submitting this piece of work I am declaring it to be my own work and in compliance with the university regulations on Academic Integrity.
- I confirm that I have done this work myself without external support or inappropriate use of resources.
- I understand that I am only permitted to use artificial intelligence tools in line with guidance provided by my Module Leader, and I have not used artificial intelligence tools outside this remit.
- I confirm that this piece of work has not been submitted for any other assignment at this or another institution prior to this point in time.
- I can confirm that all sources of information, including quotations, have been acknowledged by citing the source in the text, along with producing a full list of the sources used at the end of the assignment.
- I understand that academic misconduct is an offence and can result in formal disciplinary proceedings.
- I understand that by submitting this assignment, I declare myself fit to be able to complete the assignment and I accept the outcome of the assessment as valid and appropriate.

ANY OTHER COMMENTS FROM STUDENT:

BOOTSTRAP

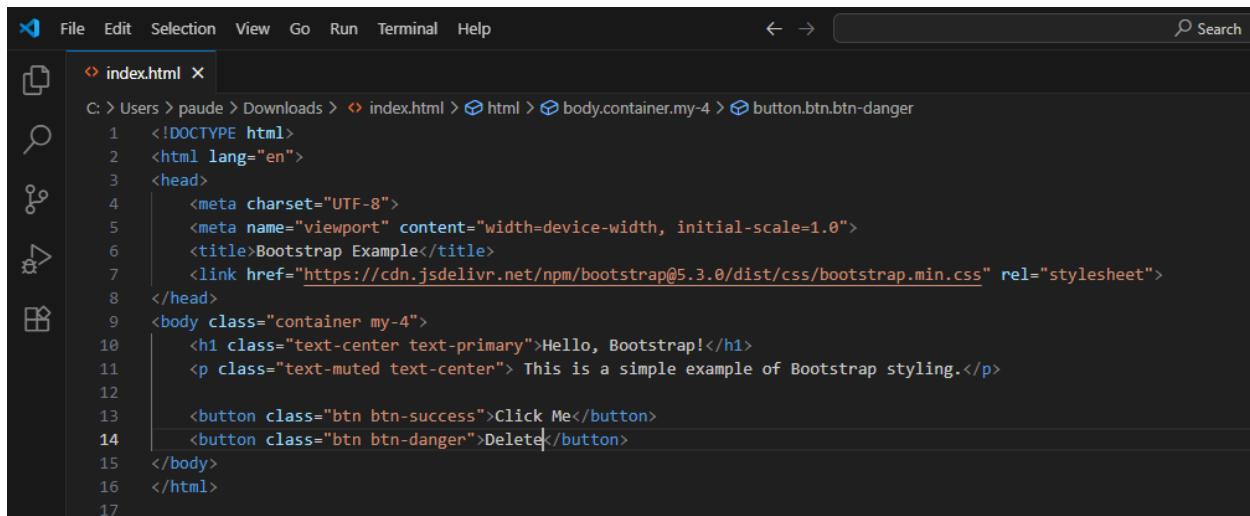
What is Bootstrap?

- Bootstrap is a free and open-source front-end framework for developing responsive, mobile-first websites. It gives you a flexible grid system, pre-styled components, and utility classes so you can save time and avoid reinventing the wheel when designing a professional looking design without having to write a lot of custom CSS.

Key Features of Bootstrap

- Responsive Grid System → Up to 12-column layout, which is easy to work with for various screen sizes.
- Prebuilt Components → With navbars, buttons, forms, tables, modals, cards and such.
- Utilities → Predefined classes spacing, align, color, and typography.
- Mobile-First Automatically adapts for phones, tablets, and desktops.
- Cross-browser Compatibility → Compatible with all the major web browsers.

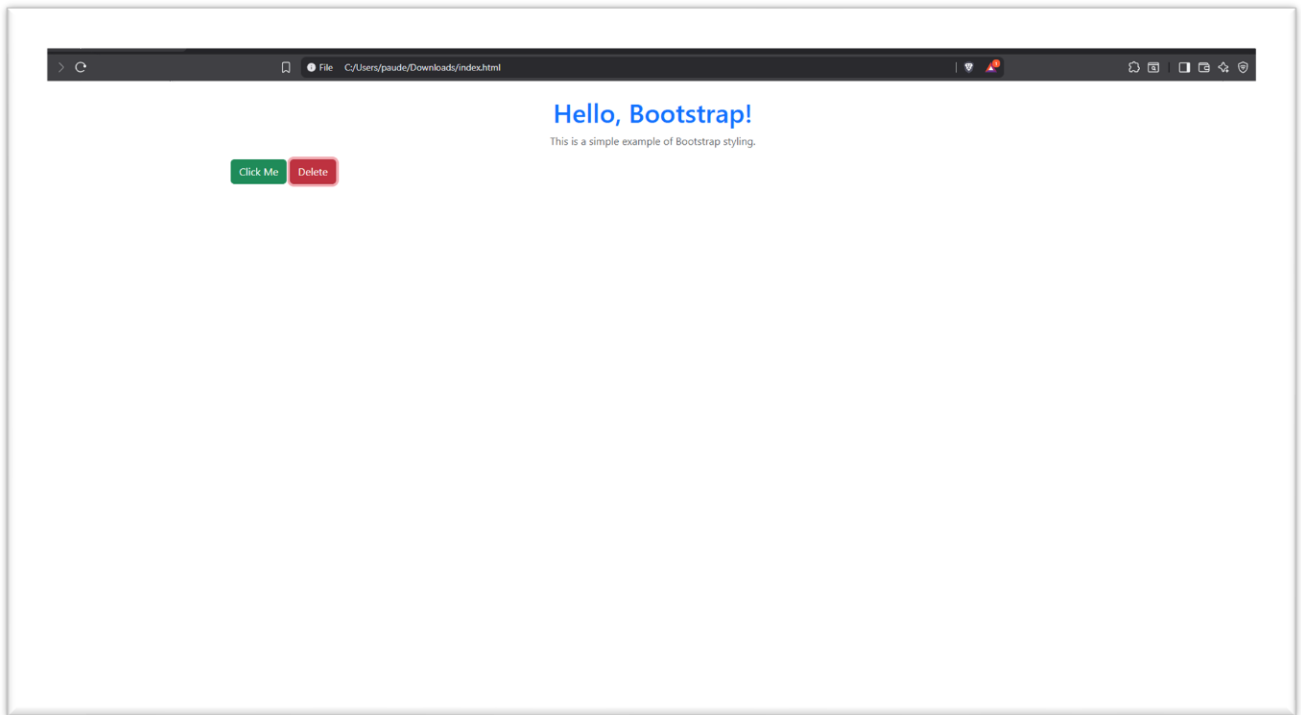
Example: Basic Bootstrap page:

A screenshot of a code editor window with a dark theme. The editor shows a file named 'index.html' with the following HTML code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Bootstrap Example</title>
7   <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
8 </head>
9 <body class="container my-4">
10   <h1 class="text-center text-primary">Hello, Bootstrap!</h1>
11   <p class="text-muted text-center"> This is a simple example of Bootstrap styling.</p>
12
13   <button class="btn btn-success">Click Me</button>
14   <button class="btn btn-danger">Delete</button>
15 </body>
16 </html>
17
```

The editor's breadcrumb path is 'C: > Users > paude > Downloads > index.html > html > body.container.my-4 > button.btn.btn-danger'. The left sidebar shows icons for Explorer, Search, Source Control, Run and Debug, and Extensions. The top menu bar includes File, Edit, Selection, View, Go, Run, Terminal, and Help. A search bar is visible in the top right corner.

Outcome of this code:



How it works:

- Bootstrap is included using `<link>` in `<head>`.
- `.text-center` centers the text in the line.
- `.text-primary` applies a blue heading color.
- `.text-muted` makes the paragraph lighter.
- Buttons are using `.btn`, `.btn-success` (green color), and `.btn-danger` (red color).

My Task: Bootstrap Projects

I have created two projects using Bootstrap:

1. Weekly Timetable

Code:

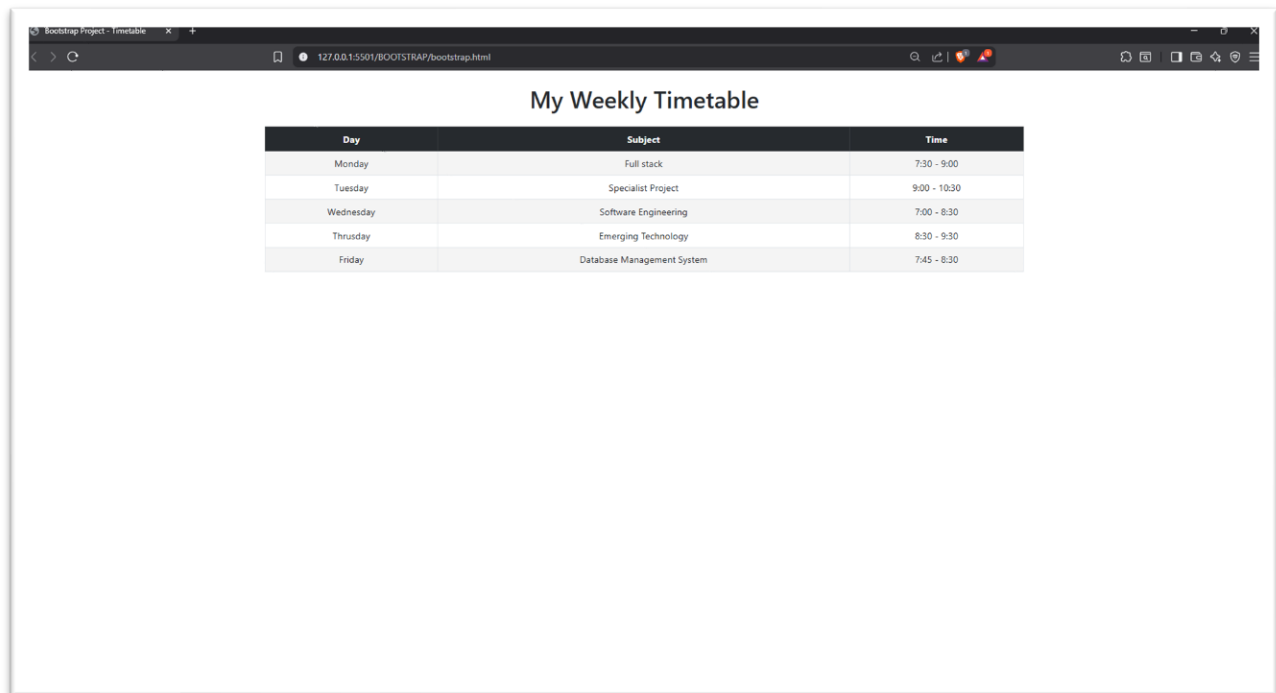
```
bootstrap.html x
BOOTSTRAP > bootstrap.html > html > body.container.my-4 > table.table.table-striped.table-bordered.text-center > tbody > tr
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta charset="UTF-8">
5    <meta name="viewport" content="width=device-width, initial-scale=1.0">
6    <title>Bootstrap Project - Timetable</title>
7    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
8  </head>
9  <body class="container my-4">
10
11    <!-- Page Heading -->
12    <h1 class="text-center mb-4">My Weekly Timetable</h1>
13
14    <!-- Timetable -->
15    <table class="table table-striped table-bordered text-center">
16      <thead class="table-dark">
17        <tr>
18          <th>Day</th>
19          <th>Subject</th>
20          <th>Time</th>
21        </tr>
22      </thead>
23      <tbody>
24        <tr>
25          <td>Monday</td>
26          <td>Full stack</td>
27          <td>7:30 - 9:00</td>
28        </tr>
29        <tr>
30          <td>Tuesday</td>
31          <td>Specialist Project</td>
32          <td>9:00 - 10:30</td>
33        </tr>
34        <tr>
35          <td>Wednesday</td>
36          <td>Software Engineering</td>
37          <td>7:00 - 8:30</td>
38        </tr>
39        <tr>
40          <td>Thursday</td>
41          <td>Emerging Technology</td>
42          <td>8:30 - 9:30</td>
43        </tr>
44        <tr>
45          <td>Friday</td>
46          <td>Database Management System</td>
47          <td>7:45 - 8:30</td>
48        </tr>
49      </tbody>
50    </table>
51  </body>
52 </html>
53
```

- `<table>` tag is been used with Bootstrap classes: `.table`, `.table-striped`, `.table-bordered`, `.table-dark`.
- Each row represents a day, subject, and time.

What it demonstrates:

- It improve the ability to use bootstrap tables for clean, responsive layouts.
- It helps use to understand about utility of classes for spacing and alignment.

Result:



Day	Subject	Time
Monday	Full stack	7:30 - 9:00
Tuesday	Specialist Project	9:00 - 10:30
Wednesday	Software Engineering	7:00 - 8:30
Thursday	Emerging Technology	8:30 - 9:30
Friday	Database Management System	7:45 - 8:30

How it Works:

1. `<div class="container">` is been used in pages for layout.
2. `.table` & `.table-striped` is used to styled `<table>`
3. To create a dark header `<thead class="table-dark">` is been used.
4. `<tbody>` lists daily schedule rows.

2. Contact Me Form

Code:

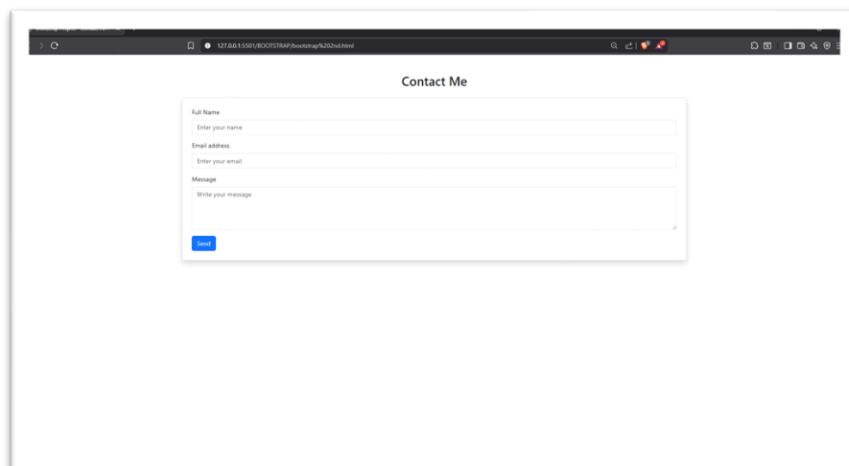
```
bootstrap2nd.html X
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Bootstrap Project - Contact Form</title>
7   <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
8 </head>
9 <body class="container my-5">
10
11   <h2 class="mb-4 text-center">Contact Me</h2>
12
13   <form class="border p-4 rounded shadow">
14     <div class="mb-3">
15       <label for="name" class="form-label">Full Name</label>
16       <input type="text" class="form-control" id="name" placeholder="Enter your name">
17     </div>
18
19     <div class="mb-3">
20       <label for="email" class="form-label">Email address</label>
21       <input type="email" class="form-control" id="email" placeholder="Enter your email">
22     </div>
23
24     <div class="mb-3">
25       <label for="message" class="form-label">Message</label>
26       <textarea class="form-control" id="message" rows="4" placeholder="Write your message"></textarea>
27     </div>
28
29     <button type="submit" class="btn btn-primary">Send</button>
30   </form>
31
32 </body>
33 </html>
34
```

- Used `<form>` with Bootstrap classes.
- Name, Email, and Message fields is been included.
- Submit button is styled with `.btn btn-primary`.

What it demonstrates:

- Understanding of Bootstrap form controls (`.form-control`, `.form-label`).
- It has an ability to build a responsive forms with no use of CSS.

Result:



How it Works:

- `<div class="container">` holds the form.
- Each input field is inside `<div class="mb-3">` for spacing.
- Labels styled with `.form-label`.
- Inputs and textarea styled with `.form-control`.
- Submit button styled with `.btn btn-primary`.