



# LAB 3 :

## Web Application

## CSS and Bootstrap Framework

## LAB 3: WEB APPLICATION PAGE STYLING USING CSS

1.

### Objective:

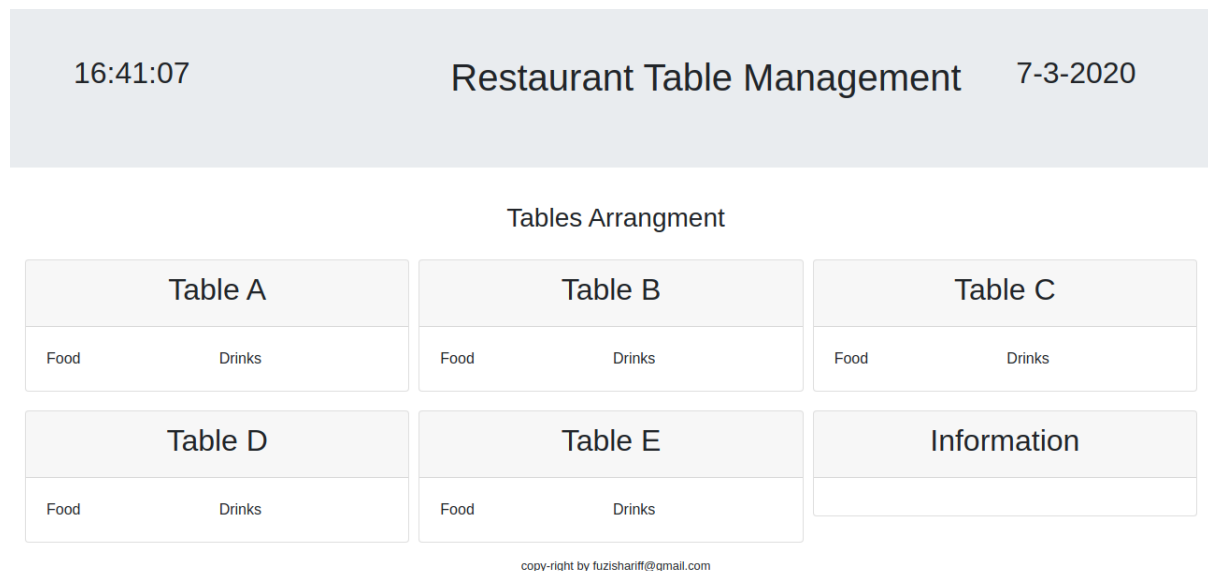
In this lab we are going to develop a dashboard for restaurant table management. CSS code must be used to style the html page in order to achieve the proper page layout that can represent a typical restaurant table layout.

### Requirements:

1. Html coding knowledge.
2. Complete Lab 1
3. Complete Lab 2

### Use Case:

The Customer needs to display table layout on a web application dashboard that represents their restaurant table layout. The screenshot shown below is the expected appearance of the dashboard.



### Steps:

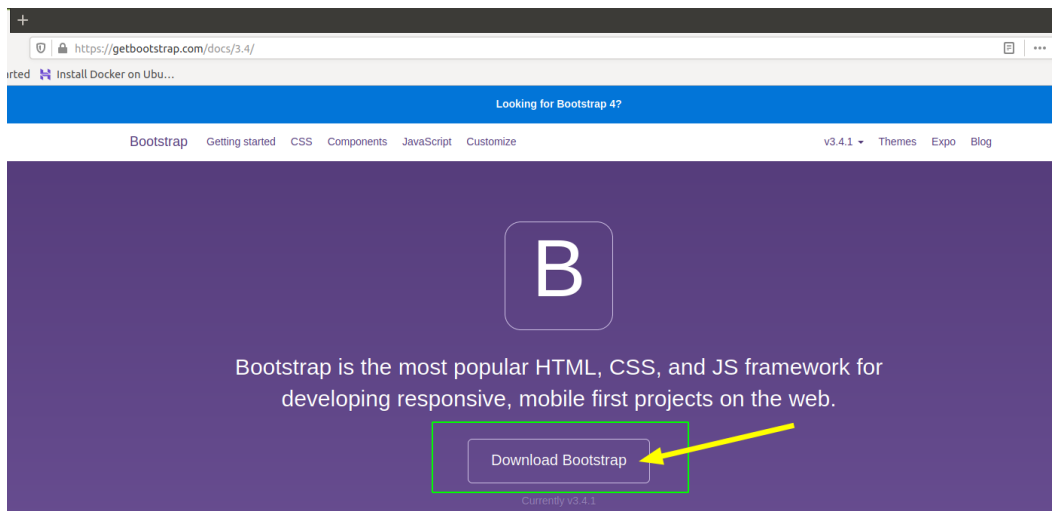
1. Copy or include Bootstrap codes into the web application, recommended in **"base.html"**, so that each page will load it automatically.
2. Create a html file to represent the table layout page, example **"tables.html"**.
3. Structure the page content using the jinja templating engine.
4. Build page using html div elements to represent rows and columns.
5. Assign each DIV element with ID.
6. Add html element to display each table id in the corresponding table div element.
7. Use CSS styling available in Bootstrap to create responsive column layout. Make it 3 columns.

Go to Bostraps webpage and download the library:

[Bootstrap V3.4.1](#)

# LAB 3: WEB APPLICATION PAGE STYLING USING CSS

1.

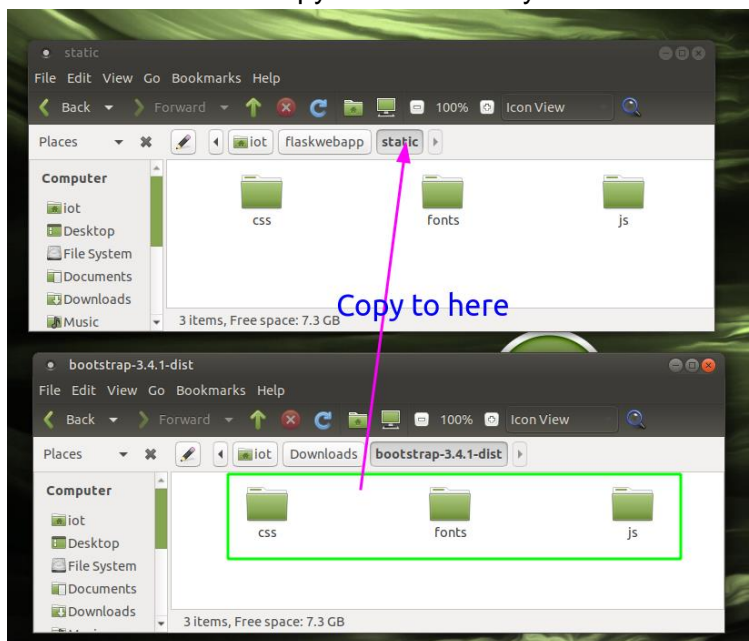


## Download

Bootstrap (currently v3.4.1) has a few easy ways to quickly get started, each one appealing to a different skill level and use case. Read through to see what suits your particular needs.

<b>Bootstrap</b> Compiled and minified CSS, JavaScript and fonts. No docs or original source files are included. <a href="#">Download Bootstrap</a>	<b>Source code</b> Source Less, JavaScript, and font files, along with our docs. <b>Requires a Less compiler and some setup.</b> <a href="#">Download source</a>	<b>Sass</b> Bootstrap ported from Less to Sass for easy inclusion in Rails, Compass, or Sass-only projects. <a href="#">Download Sass</a>
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Extract the file and copy the content to your static directory



Modify base.html to include the CSS and JS files that come with the Bootstrap library.  
ref: [jinja template inheritance](#)

## LAB 3: WEB APPLICATION PAGE STYLING USING CSS

1.

base.html:

```
<!DOCTYPE html>
<html>

<head>
  <title>Flask Template Example</title>
  <link href="{{ url_for('static', filename='css/bootstrap.min.css') }}" rel="stylesheet">
  <link href="{{ url_for('static', filename='css/main.css') }}" rel="stylesheet">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
</head>

<body>
  {% block header %}
  <h1>Flask Template Example</h1>
  {% endblock %}

  {% block content %}
  {% endblock %}

</body>

</html>
```

To test your Bootstrap setup is correct, modify your “dashboard.html” file to use one of the available classes, such as “jumbotron”.

```
{% extends "base.html" %}

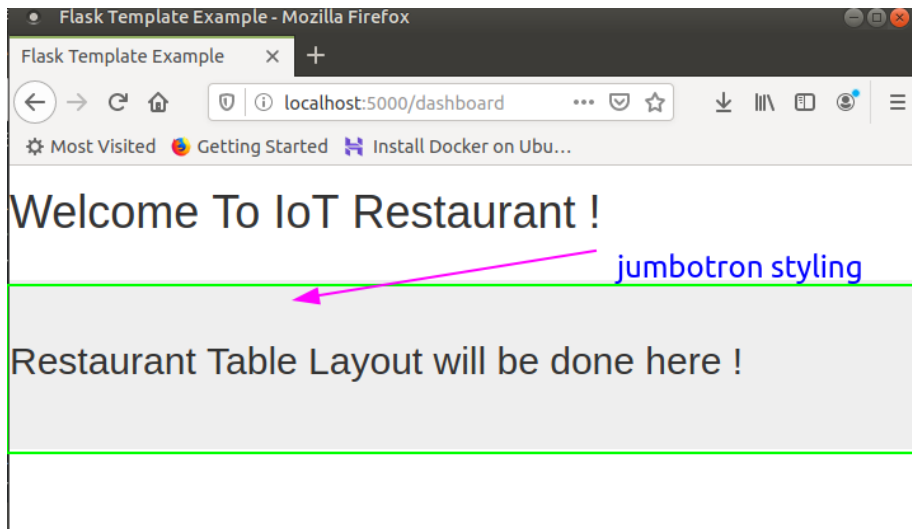
{% block header %}
<h1>Welcome To IoT Restaurant !</h1>
{% endblock %}

{% block content %}
<br>
<div class="jumbotron">
  <h2>Restaurant Table Layout will be done here ! <h2>
</div>
{% endblock %}
```

Save the file and see the difference:

## LAB 3: WEB APPLICATION PAGE STYLING USING CSS

1.



Step 2:

Create another html file in the templates directory and name it "tables.html".

We can make use of the class available in the bootstrap library called "grid system".

The class ability to build tables like layout which control the size and layout of html "DIV" elements.

It consists of class "row" and "column"

In the restaurant table layout we need 2 rows and in each row there will be 3 columns.

Entire row can accommodate 12 columns with 1 unit width.

So if we want to create only 3 columns in a row, we need to span each column by 4 unit widths to occupy all 12 unit widths across a row.

So we need to use two classes:

1. row
2. col-sm-4

Step 3:

Structure "tables.html" by inheriting from "dashboard.html" and layout html code to use bootstrap grid system.

Step 4, 5, 6, 7:

Enter the following codes and save the file.

```
{% extends "dashboard.html" %}
{% block content %}

    <br>
    <div class="container">
```

## LAB 3: WEB APPLICATION PAGE STYLING USING CSS

1.

```
<div class="row">
  <div class="col-sm-4" id="TA"><h2>Table A</h2></div>
  <div class="col-sm-4" id="TB"><h2>Table B</h2></div>
  <div class="col-sm-4" id="TC"><h2>Table C</h2></div>
</div>

<div class="row">
  <div class="col-sm-4" id="TD"><h2>Table D</h2></div>
  <div class="col-sm-4" id="TE"><h2>Table E</h2></div>
  <div class="col-sm-4" id="Info">
    <h2>Information</h2>
  </div>
</div>
</div>
{% endblock %}
```

Update app.py to add the endpoint for table.html

```
@app.route('/tables')
def tables():
    return render_template("tables.html")
```

Save app.py and check the page by using your internet browser.

