

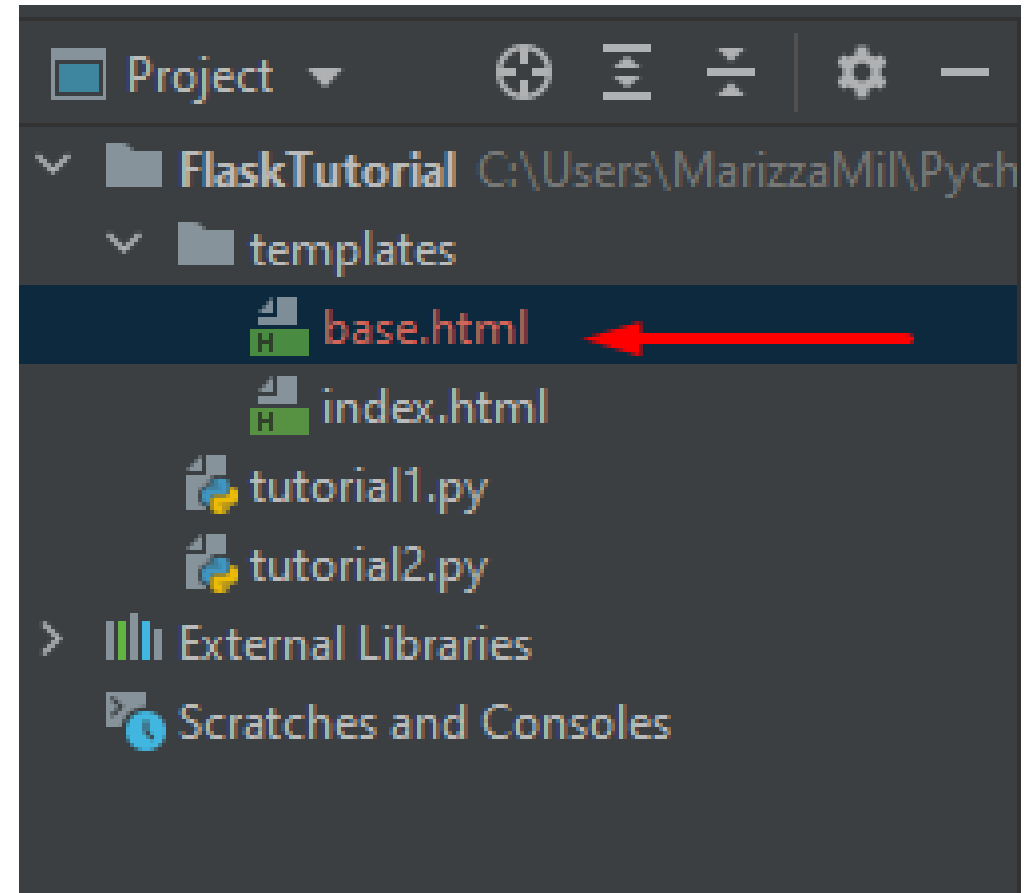
Adding Bootstrap and Template Inheritance

In this flask tutorial I will be showing how to add bootstrap to a flask website and how to use something called template inheritance. This is useful as often times you have the same HTML components that you want to show on all or many different web pages. Template inheritance allows you to make a base template that other templates can inherit from.



Creating a Base Template

So you may have realized that creating new web pages for every single page on our website is extremely inefficient. Especially when our website follows a theme and has similar elements (like a sidebar) on every page. This is where **template inheritance** comes in. We will talk about how to inherit HTML code later but we are going to start by creating a new HTML document called *"base.html"*. This will hold all of the HTML code that will persist throughout our website. Make sure to put it in the **templates** folder we created previously.



Adding Bootstrap

Bootstrap is a CSS framework that provides some pre-built CSS classes and an easy way to style your website. In the first part of this tutorial I will be showing you how to add this to your website with a few simple steps. We will simply use the CDN (content-delivery-network) to add bootstrap to our website. This involves copying some code from the [bootstrap](#) website and adding it in some specific places in our HTML.

Adding Bootstrap

Step 1: Add the following code at the beginning of the **head tags** in the "base.html" file.

```
<link rel="stylesheet"  
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"  
integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"  
crossorigin="anonymous">
```

Adding Bootstrap

Step 2: Add the following code at the beginning of the **head tags** in the "base.html" file.

```
<script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo"
crossorigin="anonymous"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
integrity="sha384-U02eT0CpHqdSJJQ6hJty5KVphtPhzWj9W01c1HTMga3JDZwrnQq4sF86dIHNDz0W1"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
integrity="sha384-JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM"
crossorigin="anonymous"></script>
```

Adding Bootstrap

This is an example of what your code should look like, directly from [bootstrap](#)

```
<!doctype html>
<html lang="en">
  <head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

    <!-- Bootstrap CSS -->
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">

    <title>Hello, world!</title>
  </head>
  <body>
    <h1>Hello, world!</h1>

    <!-- Optional JavaScript -->
    <!-- jQuery first, then Popper.js, then Bootstrap JS -->
    <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-
q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo" crossorigin="anonymous"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js" integrity="sha384-
U02eT0CpHqdSJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W1" crossorigin="anonymous"></script>
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js" integrity="sha384-
JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/njGzIxFDs4x0xIM+B07jRM" crossorigin="anonymous"></script>
  </body>
</html>
```

Template Blocks

Now that we've created our base template it is time to talk about template inheritance. Flask uses a templating engine called "Jinja" which allows us to inherit parent templates and override specific parts of them. To define what can be overwritten we need to create something in the base template called **blocks**.

The syntax for a block looks like this.

```
{% block name_of_block %}  
{% endblock %}
```

When we write this inside our html we are defining that this area of the code can be overwritten from a child template using the same block name. We can use more than one block in our templates.

Template Blocks

I've created two blocks in my "base.html" template.

base.html

```
<!doctype html>
<html>
<head>
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css" integrity="sha384-
ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">
  <title>{% block title %}{% endblock %}</title>
</head>
<body>
  {% block content %}
  {% endblock %}
  <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-
q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo" crossorigin="anonymous"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
integrity="sha384-U02eT0CpHqdSJJQ6hJty5KVphtPhzWj9W01c1HTMGa3JDZwrnQq4sF86dIHNDz0W1"
crossorigin="anonymous"></script>
  <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
integrity="sha384-JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDs4x0xIM+B07jRM"
crossorigin="anonymous"></script>
</body>
</html>
```


Inheriting Templates

Now that we have defined our blocks it's time to inherit them from our child templates.

To do this we will write an extends tag at the beginning of our file and define the blocks we want to overwrite. Placing html code inside the blocks will allow us to show unique information on each child template.

Here's an example of another html file I created called "***index.html***". It's placed in the same folder as my "base.html" file.

index.html

```
{% extends "base.html" %}
{% block title %}Home Page{% endblock %}
{% block content %}
<h1>Test</h1>
{% endblock %}
```

Adding a Sidebar

Since we added bootstrap to our website let's start using it! I'm going to add a simple sidebar to our base template that will show up on all of our pages. To do this I've merely stole some code from the bootstrap documentation and pasted in in the new HTML file called ***navbar.htm***, which placed in the same folder as my "base.html" file.

navbar.html

```
<nav class="navbar navbar-expand-lg navbar-light bg-light">
  <a class="navbar-brand" href="#">Navbar</a>
  <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarNav" aria-controls="navbarNav" aria-
expanded="false" aria-label="Toggle navigation">
    <span class="navbar-toggler-icon"></span>
  </button>
  <div class="collapse navbar-collapse" id="navbarNav">
    <ul class="navbar-nav">
      <li class="nav-item active">
        <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></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 disabled" href="#" tabindex="-1" aria-disabled="true">Disabled</a>
      </li>
    </ul>
  </div>
</nav>
```

Adding a Sidebar

And here's my "base.html" template.

base.html

```
<!doctype html>
<html>
<head>
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
    integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">
    <title>{% block title %}{% endblock %}</title>
</head>
<body>

    {% include "navbar.html" %}
    {% block content %}
    {% endblock %}

    <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-
    q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo" crossorigin="anonymous"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js" integrity="sha384-
    U02eT0CpHqdSJQ6hJty5KVphtPhzWj9W01clHTMGa3JDZwrnQq4sF86dIHNDz0W1" crossorigin="anonymous"></script>
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js" integrity="sha384-
    JjSmVgyd0p3pXB1rRibZUAYoIIy60rQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM" crossorigin="anonymous"></script>
</body>
</html>
```

Rendering the Page

Now it's time to display our website! For this specific tutorial I'll just render the "index.html" template to show you that everything is working.

tutorial3.py

```
from flask import Flask, redirect, url_for, render_template
```

```
app = Flask(__name__)
```

```
@app.route("/")
```

```
def home():
```

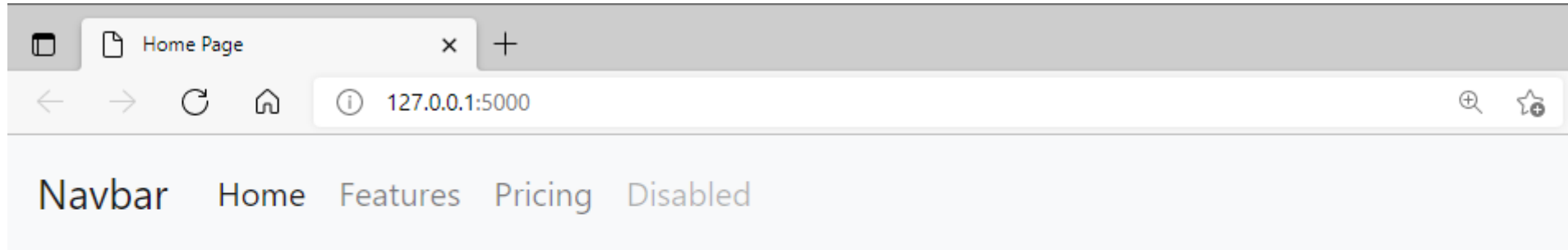
```
    return render_template("index.html")
```

```
if __name__ == "__main__":
```

```
    app.run(debug=True)
```

Rendering the Page

Now when we head to "/" we see the following!



Test