

Lesson 01 Demo 03

Web MVC App in Spring Boot

Objective: To create a spring web MVC application using the spring boot and run the created web application

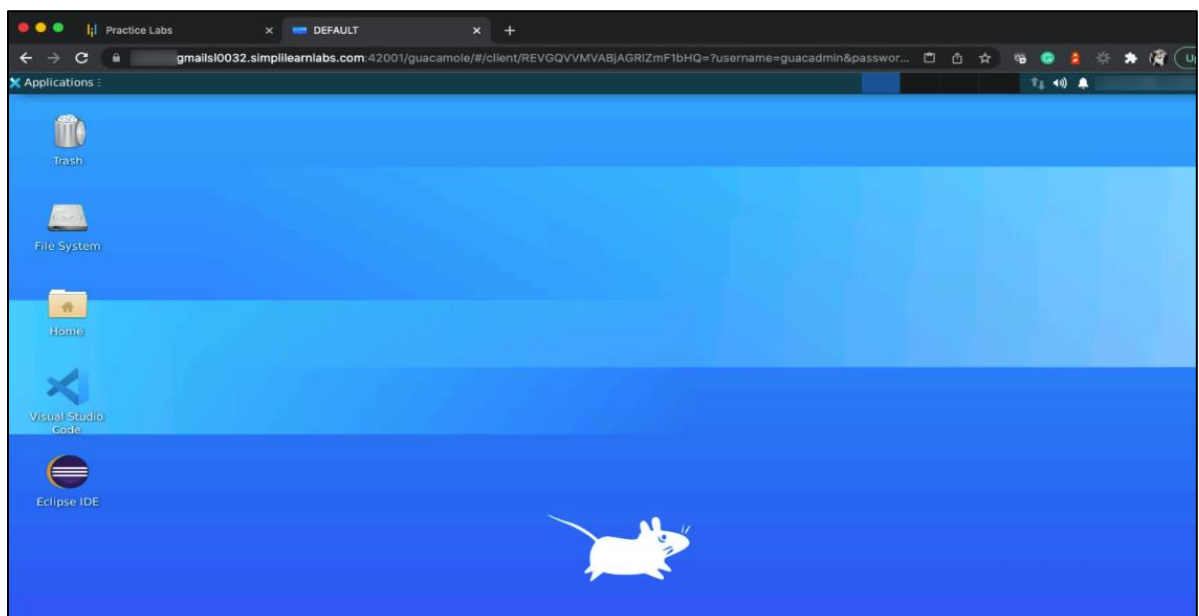
Tools required: Eclipse IDE

Steps to be followed:

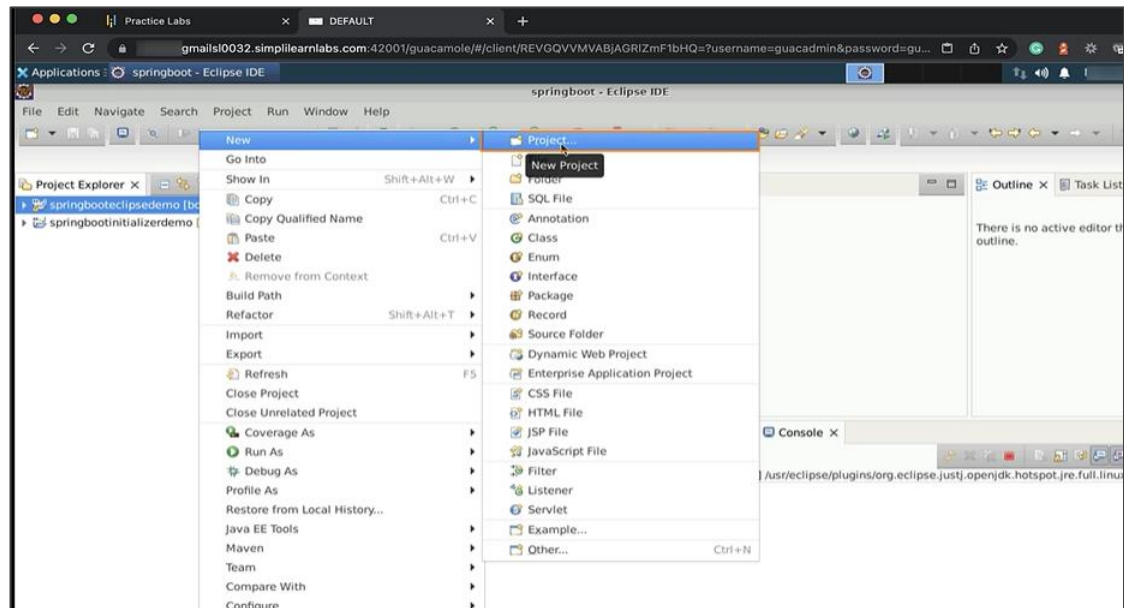
1. Creating a new Spring Boot project
2. Creating a view template and running the application

Step 1: Creating a new Spring Boot project

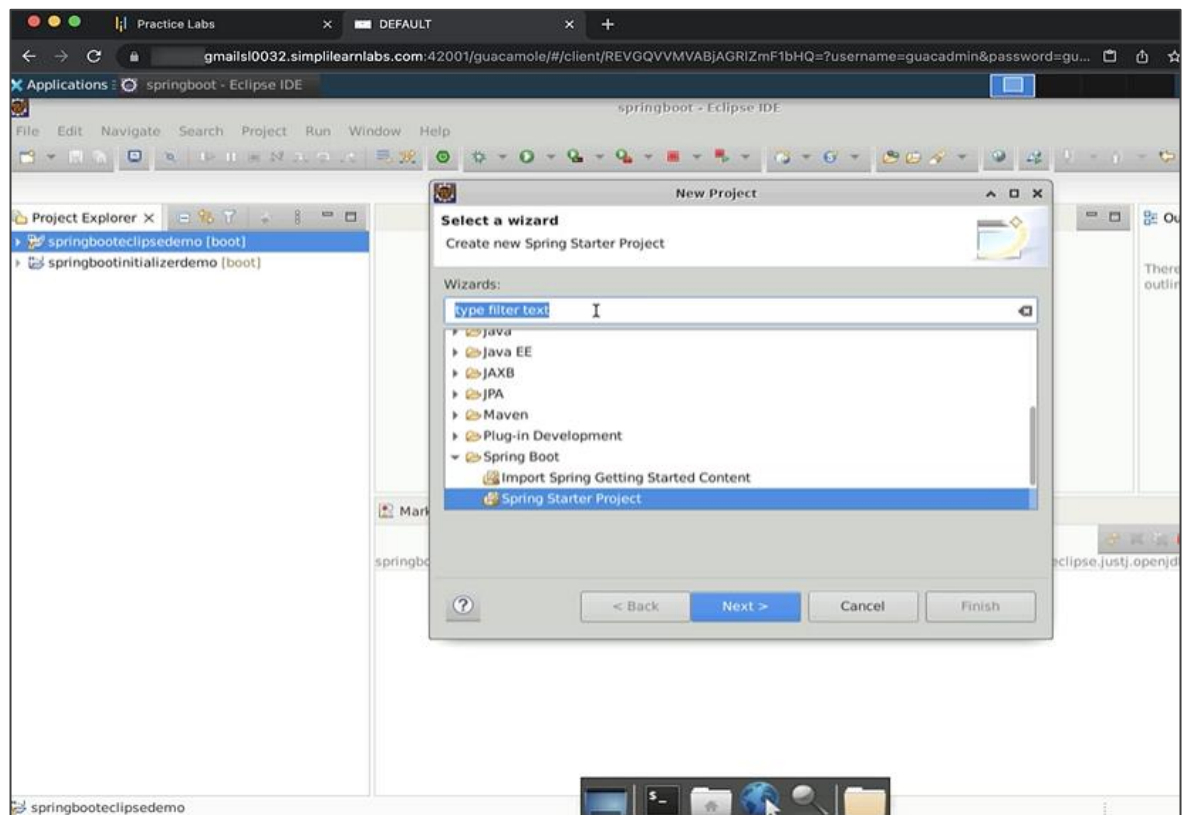
1.1 Open Eclipse IDE



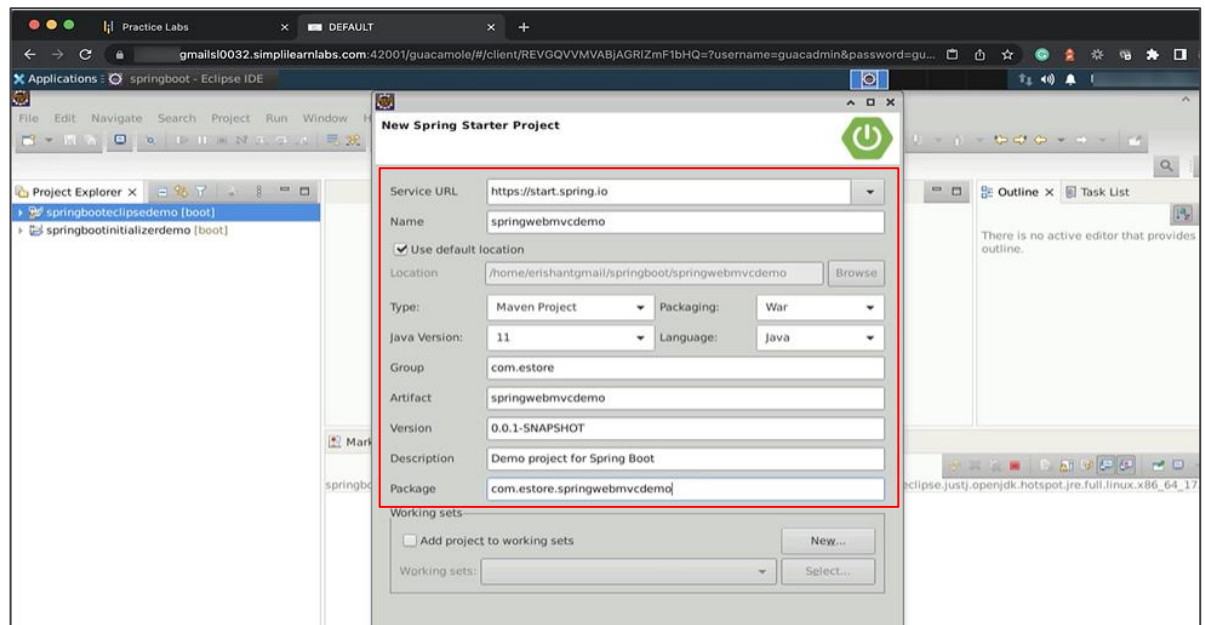
1.2 To create a new project, **right-click** on the screen > **New** > **Project**



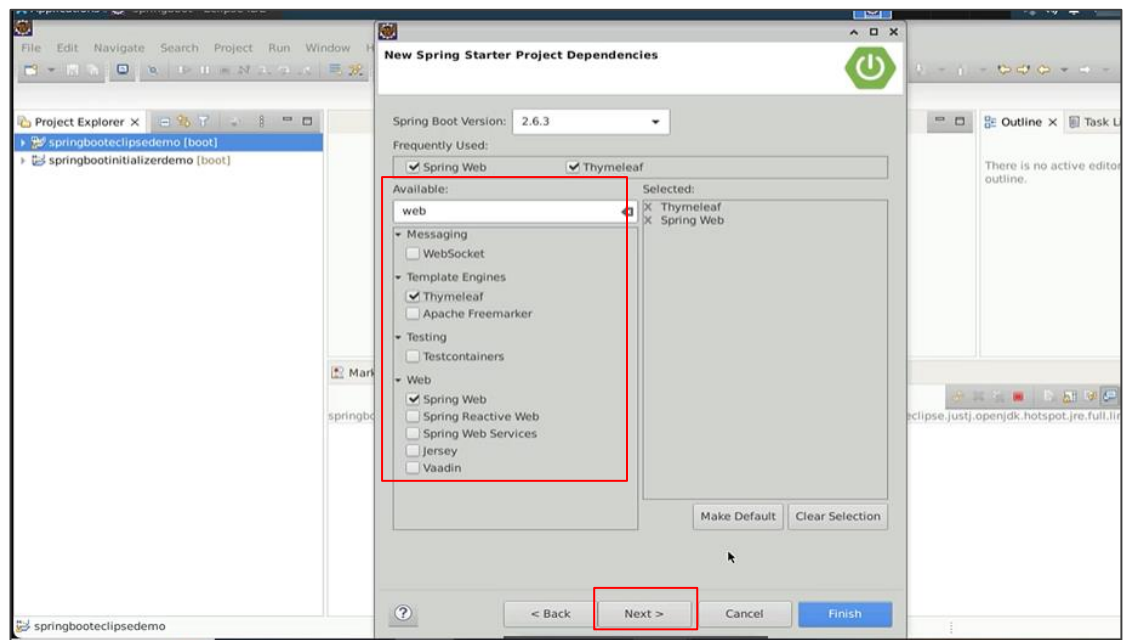
1.3 Select **Spring Starter Project** and click **Next**



- 1.4 The project name must be **springwebmvcdemo**, the type will be **Maven Project**, and the packaging will be **War**. Rectify the package name to **com.estore.springwebmvcdemo** and select **Next**

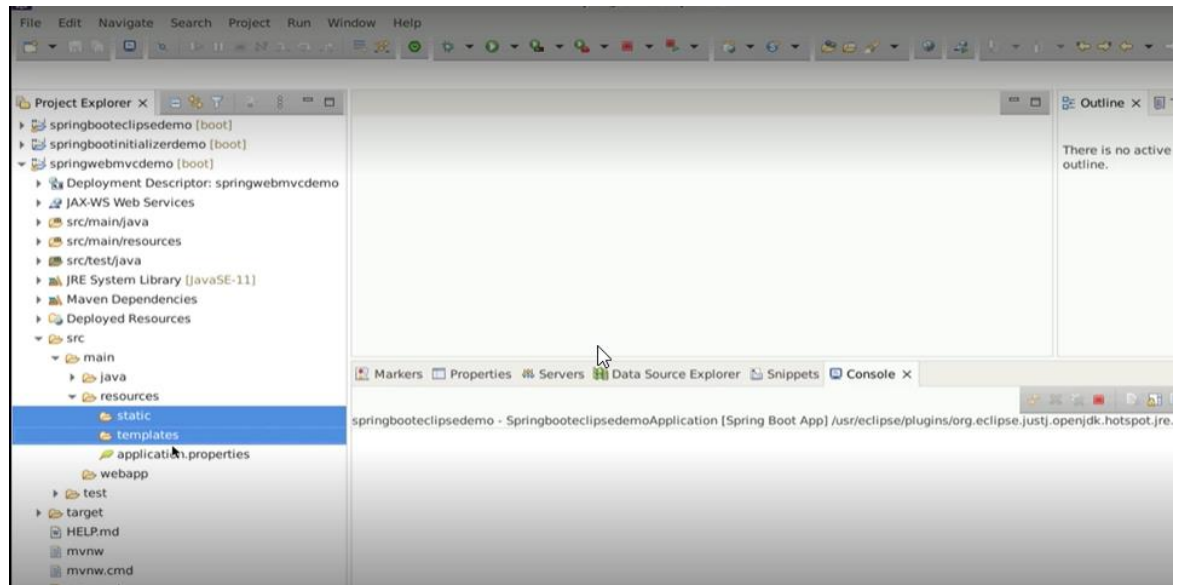


- 1.5 Choose the **Spring Web** for the web and **Thymeleaf** for the template and click **Next** and **Finish**

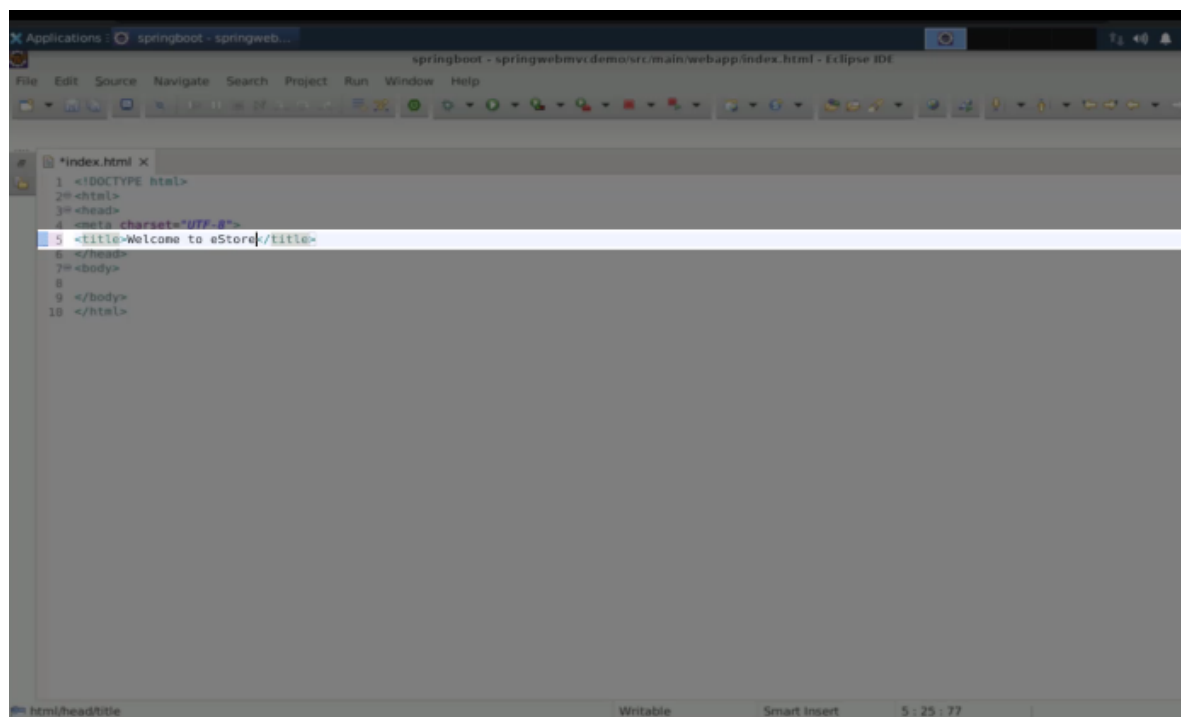


Step 2: Creating a view template and running the application

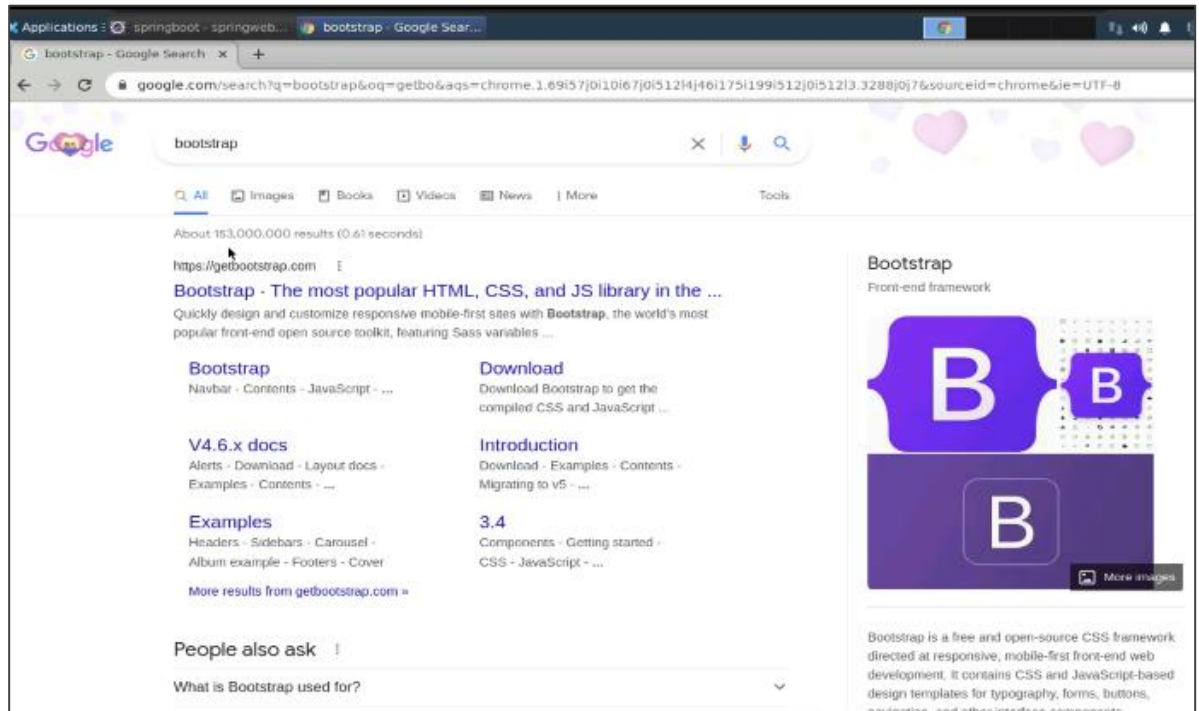
2.1 Create a static page as an HTML file as the first landing page



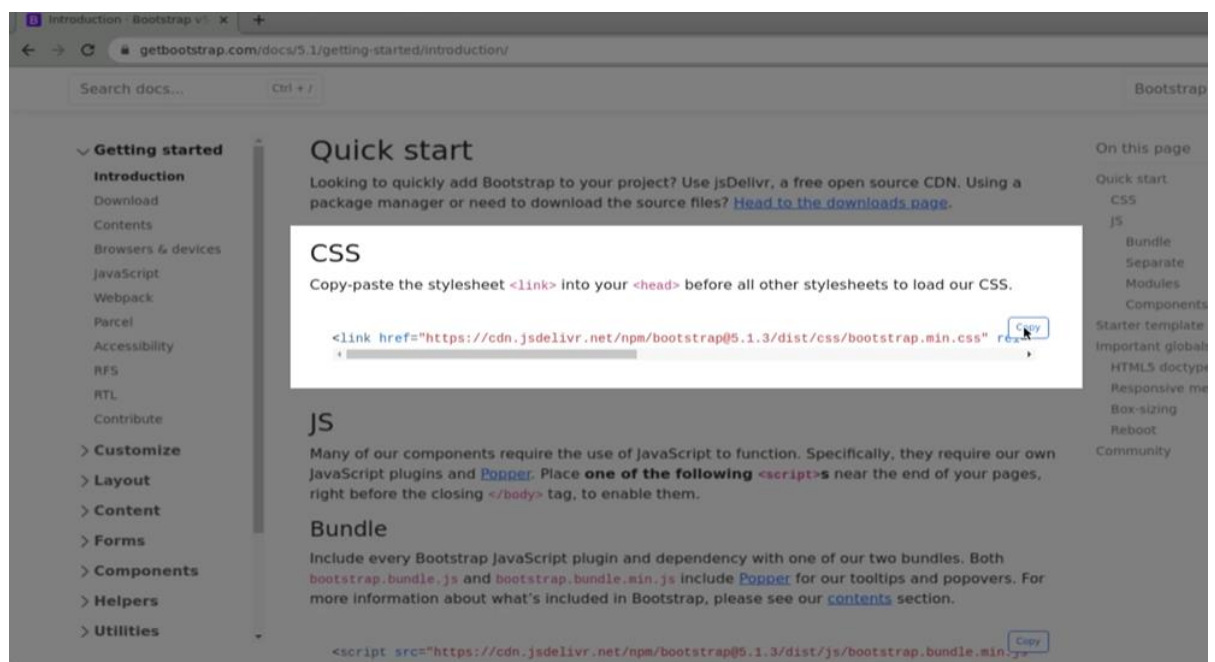
2.2 Name the html file as **index.html**, and add the title **Welcome to eStore** in the HTML file



2.3 Add some **CSS parts** from the bootstrap and search for the **getbootstrap** framework on the browser



2.4 Copy the **CSS** from the browser



2.5 Add the CSS inside the **head tag** in the HTML file and **paste** the highlighted code

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BnE4kqW0781YhF1dVkuhTTAU6au08tT94WrH" />
7 </head>
8 <body>
9
10 </body>
11 </html>

```

2.6 Also, copy the JS Bundle script from the website. **Paste** the script in the index.html

JS

Many of our components require the use of JavaScript to function. Specifically, they require our own JavaScript plugins and **Popper**. Place **one of the following <script>s** near the end of your pages, right before the closing `</body>` tag, to enable them.

Bundle

Include every Bootstrap JavaScript plugin and dependency with one of our two bundles. Both `bootstrap.bundle.js` and `bootstrap.bundle.min.js` include [Popper](#) for our tooltips and popovers. For more information about what's included in Bootstrap, please see our [contents](#) section.

```
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js">
```

Separate

If you decide to go with the separate scripts solution, Popper must come first (if you're using tooltips or popovers), and then our JavaScript plugins.

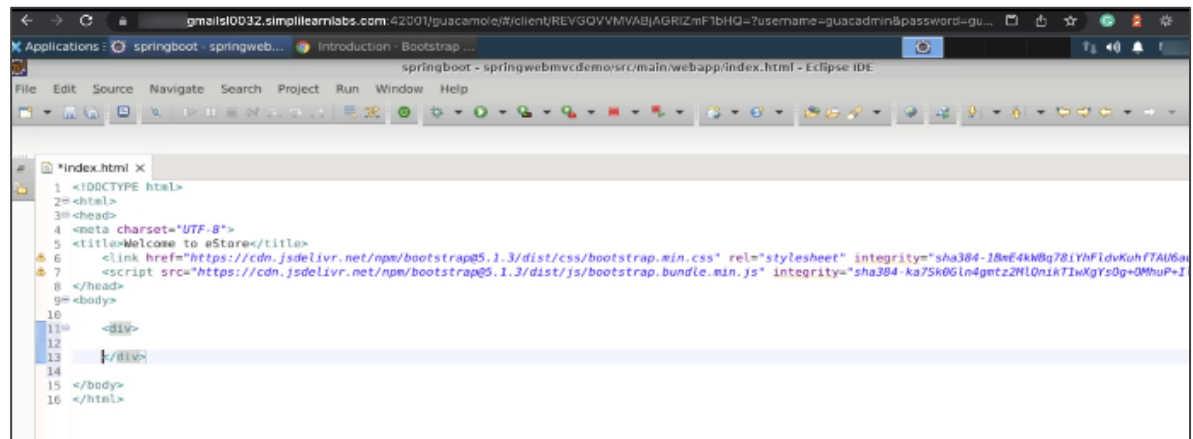
```
<script src="https://cdn.jsdelivr.net/npm/popper.js/core@2.10.2/dist/umd/popper.min.js">
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.min.js" integrity="
```

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BnE4kqW0781YhF1dVkuhTTAU6au08tT94WrH" />
7 </head>
8 <body>
9
10 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka7Sk0Gln4gmtz2MlQn1Kt1xXgYs0g+OMhuP+ILR9H9s0g" />
11 </body>
12 </html>

```


2.7 Create a **div** tag in the body

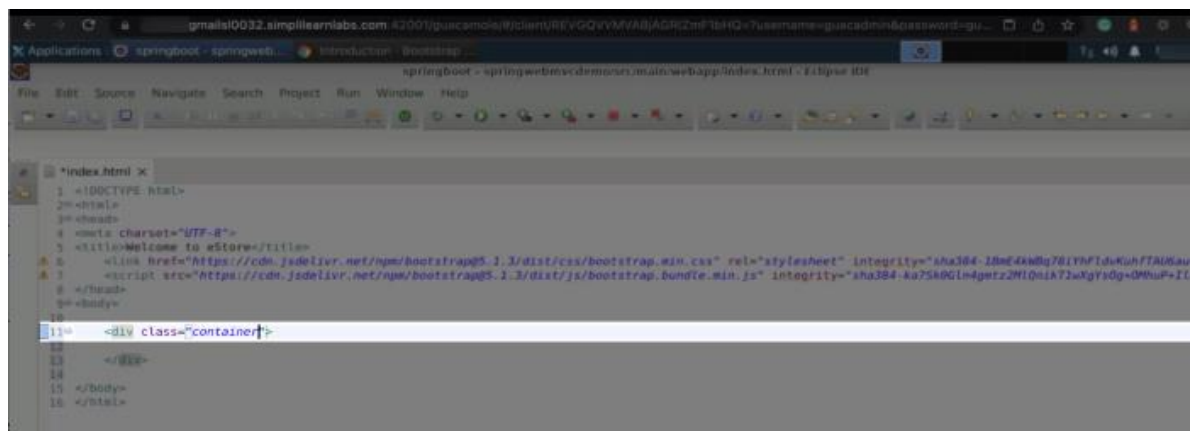


```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-18ne4k8Bg781YhF1duKuhfTAU6au
7 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka75k0Gln4gtz2M10n1k71wXgYs0g+0MhuP+2
8 </head>
9 <body>
10
11 <div>
12
13 </div>
14
15 </body>
16 </html>

```

2.8 Write a **container** class within the div tag



```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-18ne4k8Bg781YhF1duKuhfTAU6au
7 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka75k0Gln4gtz2M10n1k71wXgYs0g+0MhuP+2
8 </head>
9 <body>
10
11 <div class="container">
12
13 </div>
14
15 </body>
16 </html>

```

2.9 Create another **div** tag for Bootstrap with the **class, background, and text color**



```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-18ne4k8Bg781YhF1duKuhfTAU6au
7 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka75k0Gln4gtz2M10n1k71wXgYs0g+0MhuP+2
8 </head>
9 <body>
10
11 <div class="container">
12 <div class="mt-4 p-5 bg-primary text-white rounded">
13
14 </div>
15 </div>
16
17 </body>
18 </html>

```

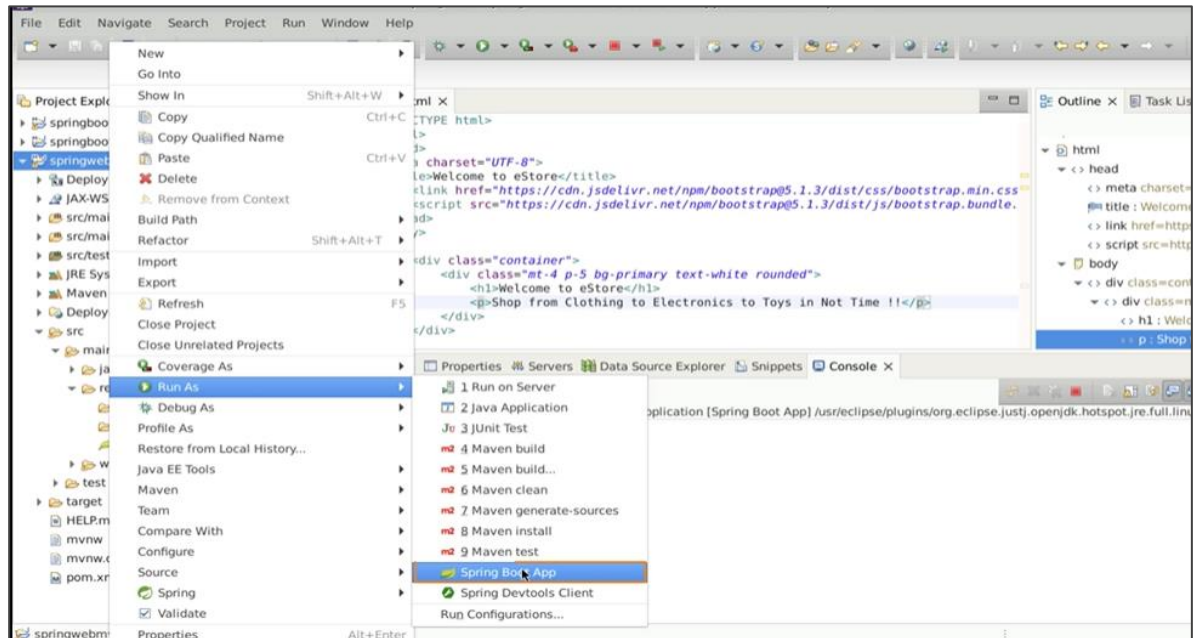
2.10 Add an **h1** tag and add a **paragraph** tag

```

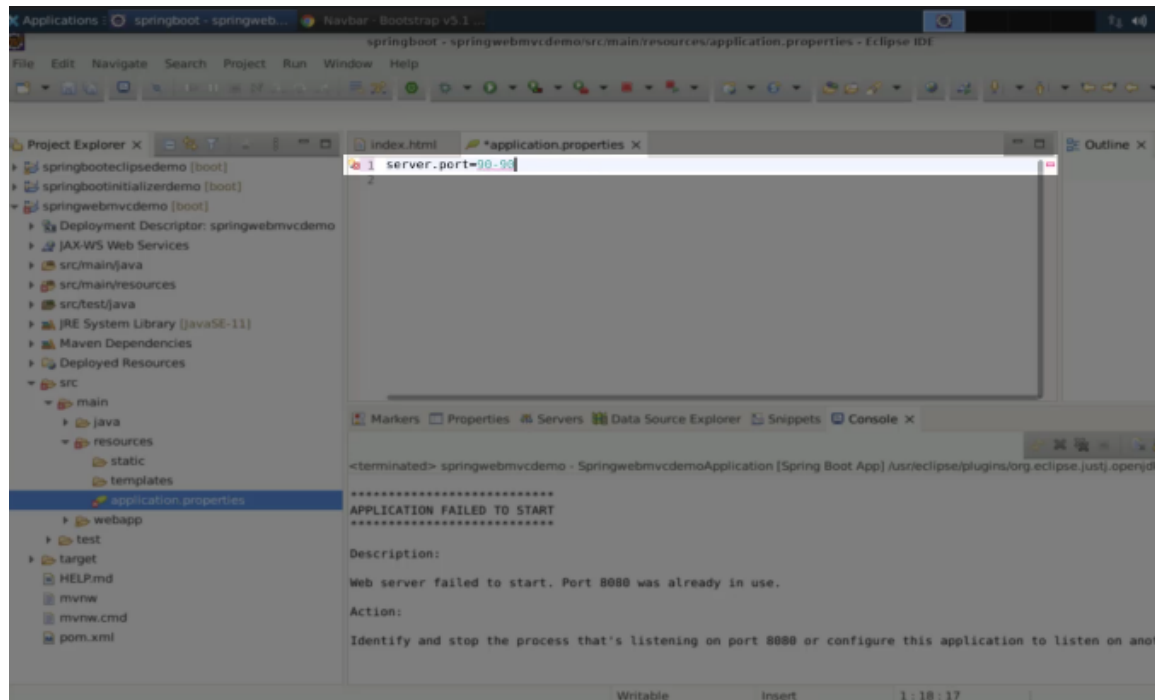
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4kWBq78IYHfVdVhFuTAU6au"
7 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka7Sk0Gln4gmtz2MlQnik1LwXgYs0g+0MhuP+Il
8 </head>
9 <body>
10
11 <div class="container">
12 <div class="mt-4 p-5 bg-primary text-white rounded">
13 <h1>Welcome to eStore</h1>
14 <p>Shop from Clothing to Electronics to Toys in Not Time !!</p>
15 </div>
16 </div>
17
18 </body>
19 </html>

```

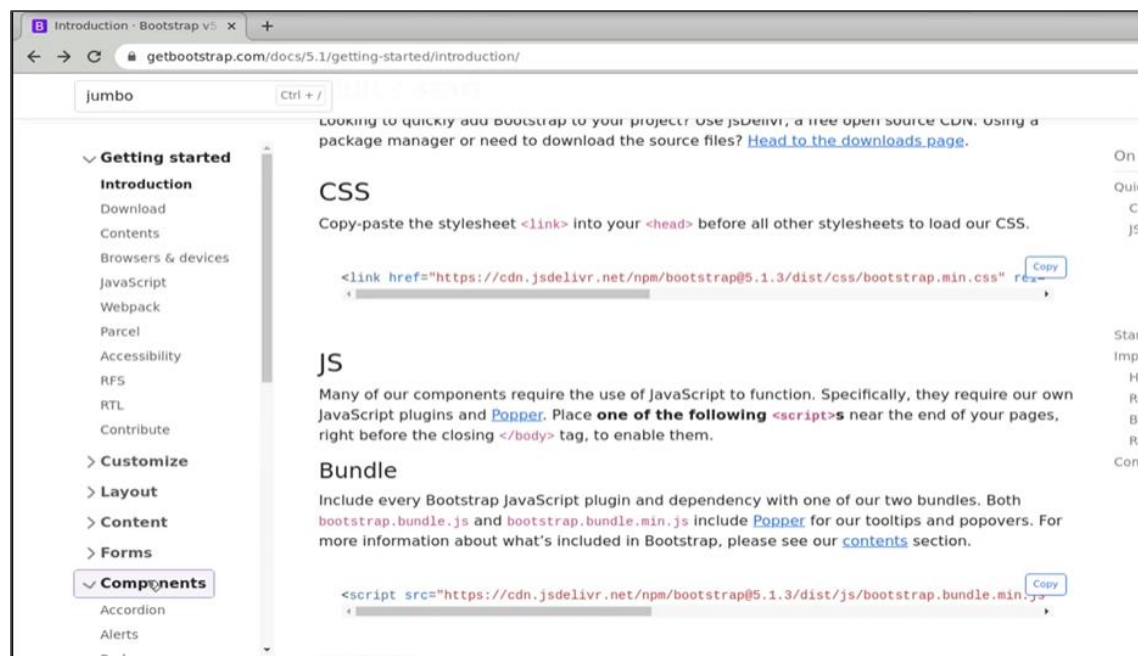
2.11 Run the project as a **Spring Boot App**



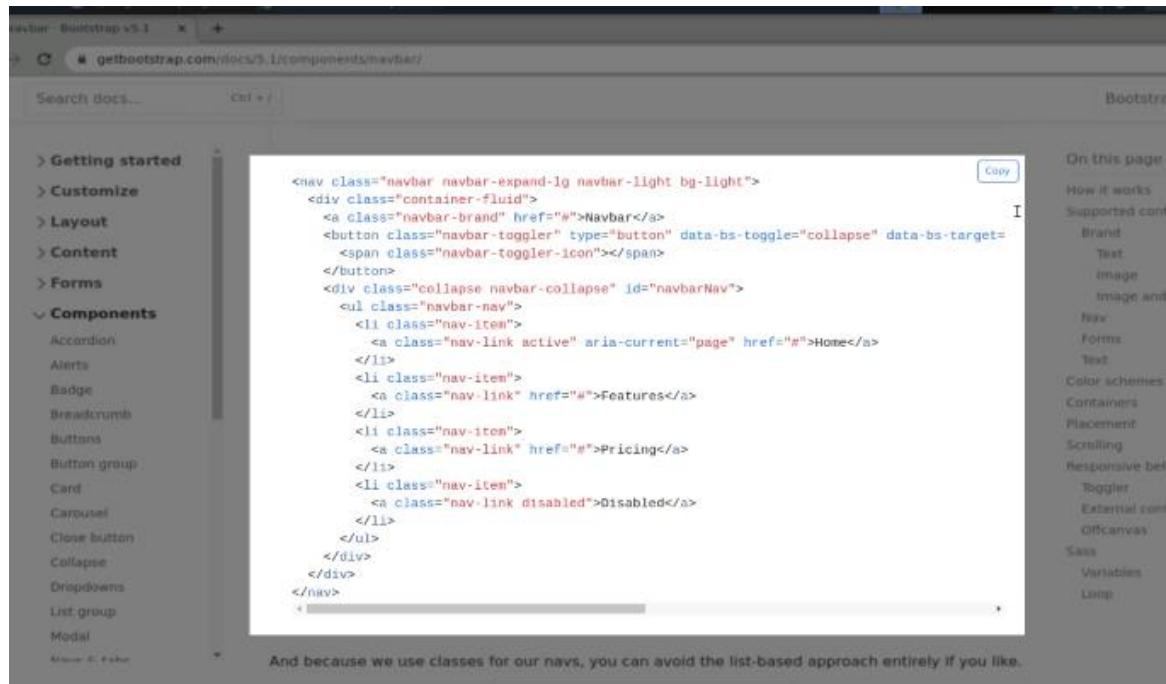
2.12 Configure the port number in the **application.properties** file, which will be 8080; change it to 9090



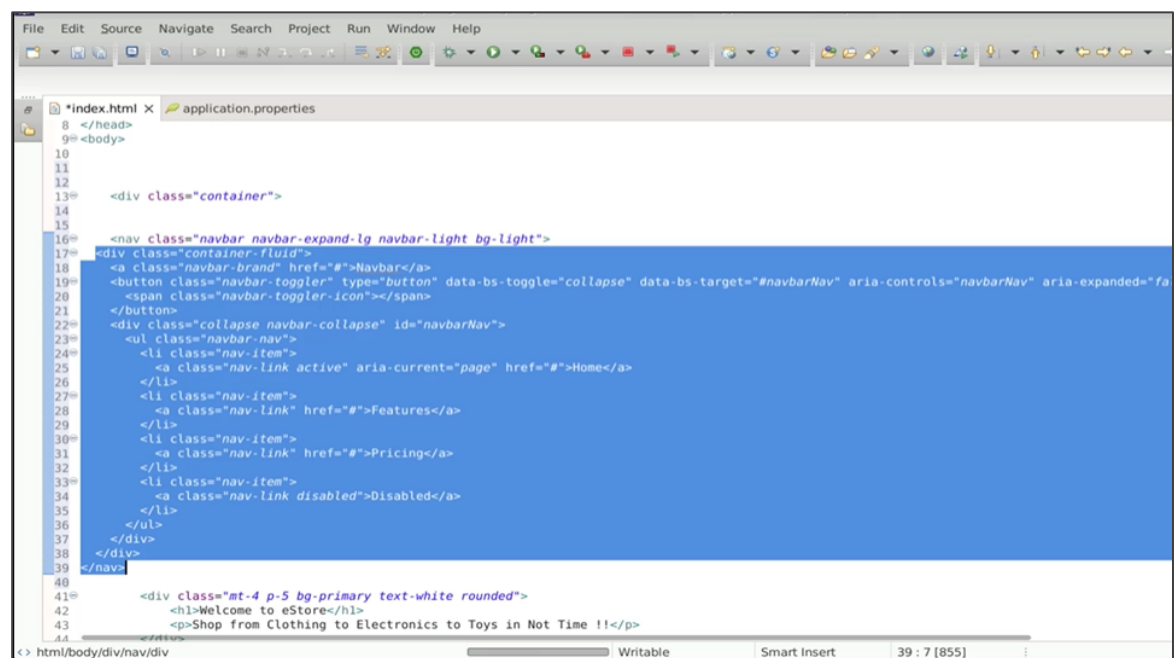
2.13 Choose **Components** from Bootstrap for the interactivity of the web page



2.14 Copy the **nav bar** code from the website



2.15 Paste it into the index file inside the **container** class only



2.16 Delete the highlighted button tag from the code

```

9<body>
10
11
12
13<div class="container">
14
15
16<nav class="navbar navbar-expand-lg navbar-light bg-light">
17  <div class="container-fluid">
18    <a class="navbar-brand" href="#">Navbar</a>
19    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">
20      <span class="navbar-toggler-icon"></span>
21    </button>
22    <div class="collapse navbar-collapse" id="navbarNav">
23      <ul class="navbar-nav">
24        <li class="nav-item">
25          <a class="nav-link active" aria-current="page" href="#">Home</a>
26        </li>
27        <li class="nav-item">
28          <a class="nav-link" href="#">Features</a>
29        </li>
30        <li class="nav-item">
31          <a class="nav-link" href="#">Pricing</a>
32        </li>
33        <li class="nav-item">
34          <a class="nav-link disabled">Disabled</a>
35        </li>
36      </ul>
37    </div>
38  </div>
39</nav>
40
41<div class="mt-4 p-5 bg-primary text-white rounded">
  
```

2.17 Add **Register**, **Product**, and **Account** in the nav class for the eStore website. These are a few of the navigation links that you have created.

```

4<meta charset="UTF-8">
5<title>Welcome to eStore</title>
6<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4kWBq78iYhFldvKuht" crossorigin="anonymous">
7<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka75k0Gln4gtz2M1Qnik1TwXgYs0g+0M" crossorigin="anonymous"></script>
8</head>
9<body>
10
11
12
13<div class="container">
14
15
16<nav class="navbar navbar-expand-lg navbar-light bg-light">
17  <div class="container-fluid">
18    <li class="nav-item">
19      <a class="nav-link" href="#">Register</a>
20    </li>
21    <li class="nav-item">
22      <a class="nav-link" href="#">Products</a>
23    </li>
24    <li class="nav-item">
25      <a class="nav-link disabled">Account</a>
26    </li>
27  </ul>
28  </div>
29</nav>
30
31
32<div class="mt-4 p-5 bg-primary text-white rounded">
33  <h1>Welcome to eStore</h1>
34  <p>Shop from Clothing to Electronics to Toys in Not Time !!</p>
35</div>
36</div>
37</body>
38</html>
39</html>
  
```

2.18 Delete the highlighted part and run the code

```

5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1Bx4E4w8Q781YHf1dvK
7 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka75k0G6L4gert22M10n1k71wK9rs0g
8 </head>
9 <body>
10
11
12
13 <div class="container">
14
15
16 <nav class="navbar navbar-expand-lg navbar-light bg-light">
17 <div class="container-fluid">
18 <a class="navbar-brand" href="#">eStore</a>
19 <li class="nav-item">
20 <a class="nav-link" href="#">Register</a>
21 </li>
22 <li class="nav-item">
23 <a class="nav-link" href="#">Products</a>
24 </li>
25 <li class="nav-item">
26 <a class="nav-link disabled">Account</a>
27 </li>
28 </div>
29 </nav>
30
31
32 <div class="mt-4 p-5 bg-primary text-white rounded">
33 <h1>Welcome to eStore</h1>
34 <p>Shop from Clothing to Electronics to Toys in Not Time !!</p>
35 </div>
36
37 </div>
38
39 </body>
40 </html>

```

```

Project Explorer
springbootecipsdemo [boot]
springbootinitializordemo [boot]
springwebmvcdemo [boot]
  Deployment Descriptor: springwebmvcdemo
  JAX-WS Web Services
  src/main/java
  src/main/resources
  src/test/java
  JRE System Library [JavaSE-11]
  Maven Dependencies
  Deployed Resources
  src
    main
      java
      resources
      templates
      application.properties
    webapp
    test
    target
    HELP.md
    mvnw
    mvnw.cmd
    pom.xml

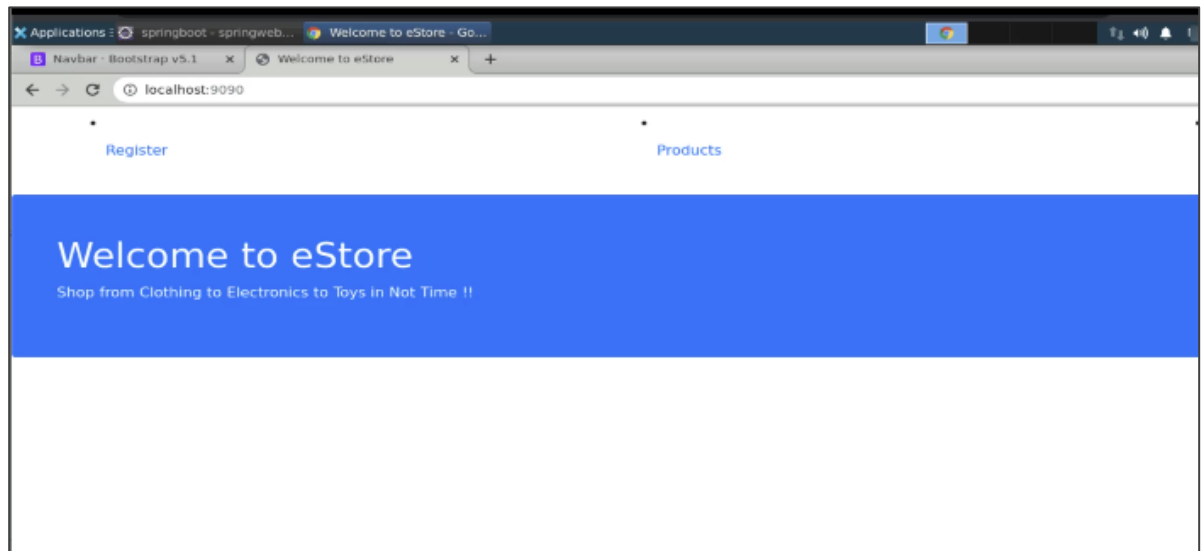
Index.html
1 server.port=8080
2

Console
springwebmvcdemo - SpringwebmvcdemoApplication [Spring Boot App]
:: Spring Boot ::
(v2.6.3)

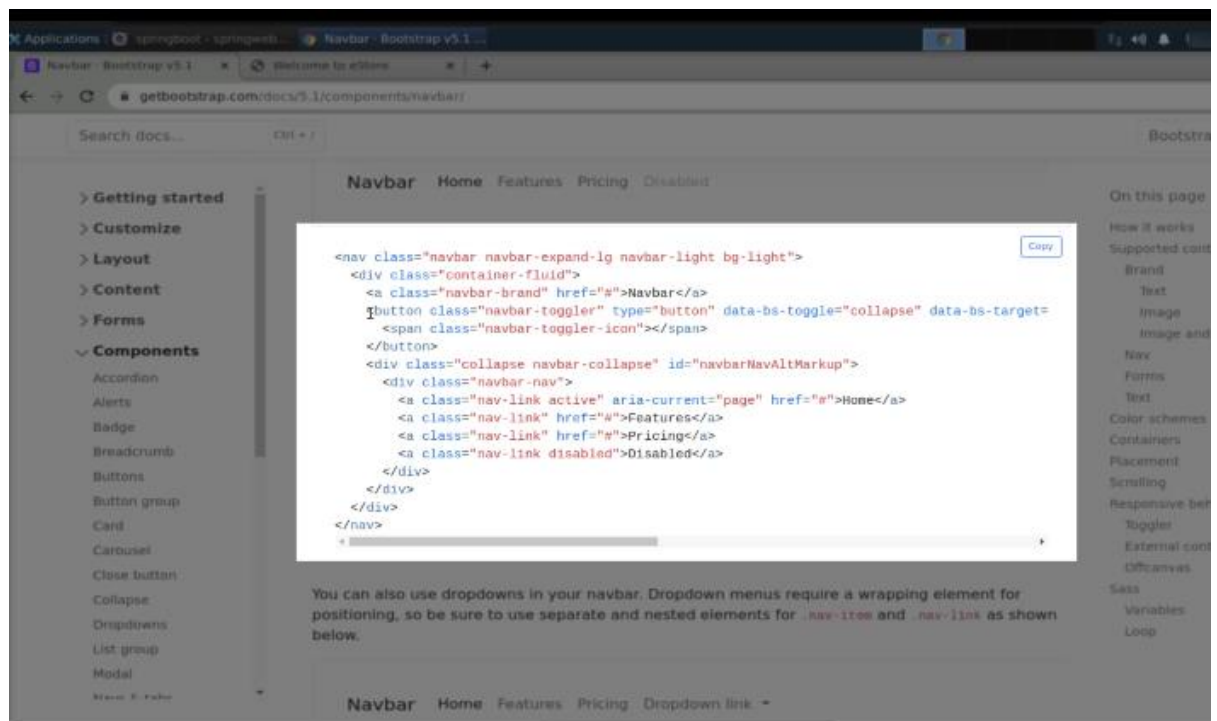
2022-02-14 09:00:55.014 INFO 20282 --- [main] c.e.s.SpringwebmvcdemoApplication : Starting
2022-02-14 09:00:55.016 INFO 20282 --- [main] c.e.s.SpringwebmvcdemoApplication : No act
2022-02-14 09:00:55.694 INFO 20282 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat
2022-02-14 09:00:55.782 INFO 20282 --- [main] o.apache.catalina.core.StandardEngine : Starting
2022-02-14 09:00:55.782 INFO 20282 --- [main] org.apache.catalina.core.StandardEngine : Starting
2022-02-14 09:00:55.743 INFO 20282 --- [main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initial
2022-02-14 09:00:55.743 INFO 20282 --- [main] w.s.c.ServletWebServerApplicationContext : Root We
2022-02-14 09:00:55.913 INFO 20282 --- [main] o.s.b.a.w.s.WelcomePageHandlerMapping : Adding
2022-02-14 09:00:55.952 WARN 20282 --- [main] ionSDefaultTemplateResolverConfiguration : Cannot
2022-02-14 09:00:56.003 INFO 20282 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat
2022-02-14 09:00:56.011 INFO 20282 --- [main] c.e.s.SpringwebmvcdemoApplication : Started

```

2.19 Search for localhost 9090 in your browser. The output is successful.



2.20 Copy another navigation bar structure from the website



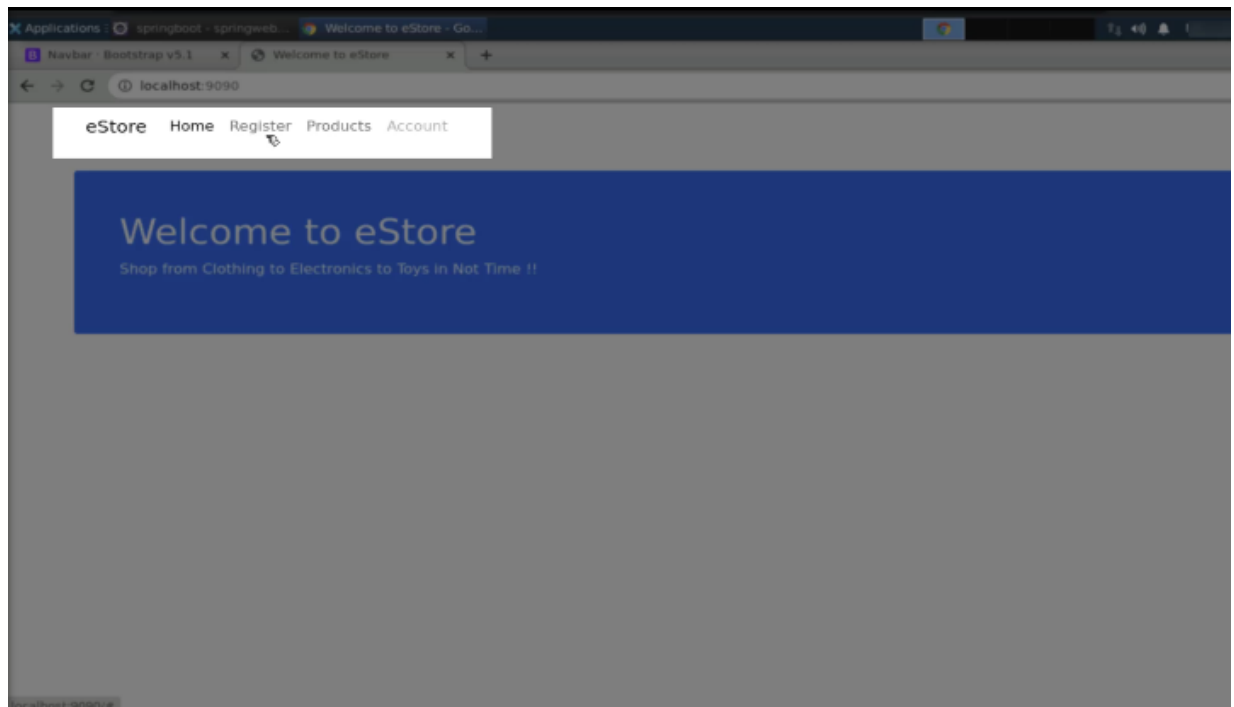
2.21 Replace the previous **nav bar** script with the new script in html file

```

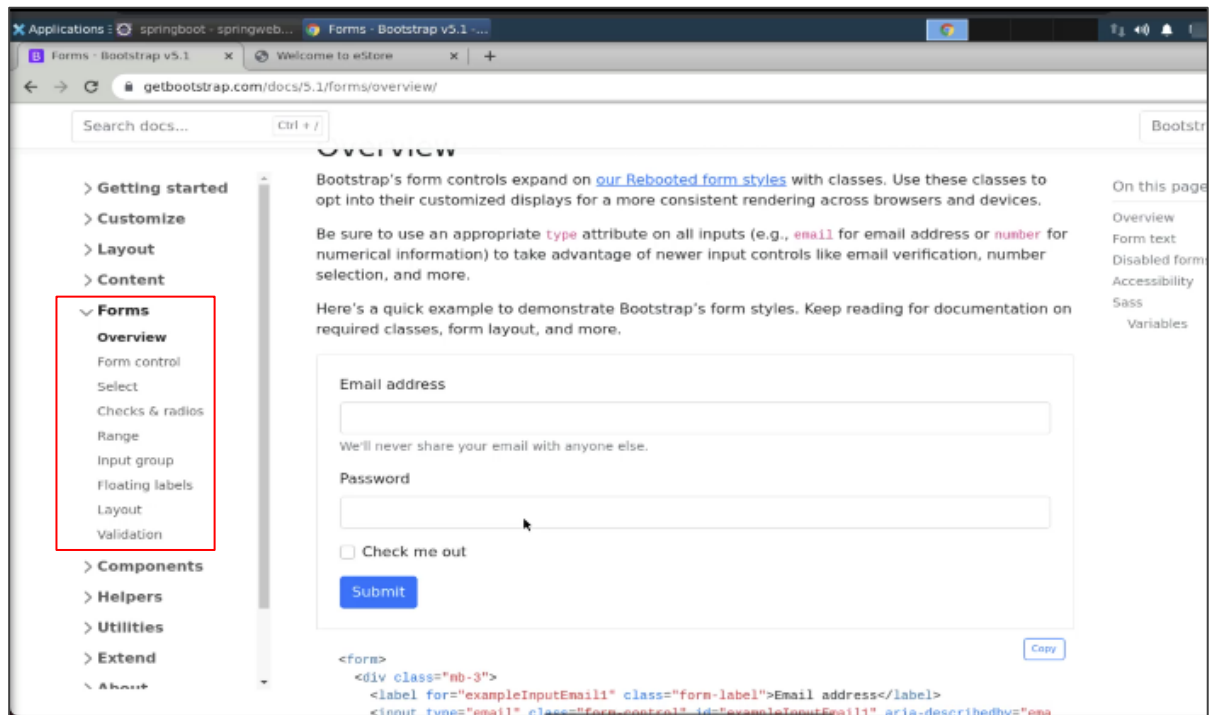
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Welcome to eStore</title>
6 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-18m44w8g781YhflvKuhfTAU6au"
7 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka75k061n4gmtz2Wl0n1k71wK9Ys0g+0MhuP+I"
8 </head>
9 <body>
10
11
12
13
14
15 <div class="container">
16 <nav class="navbar navbar-expand-lg navbar-light bg-light">
17 <div class="container-fluid">
18 <a class="navbar-brand" href="#">eStore</a>
19 <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup"
20 </button>
21 <div class="collapse navbar-collapse" id="navbarNavAltMarkup">
22 <div class="navbar-nav">
23 <a class="nav-link active" aria-current="page" href="#">Home</a>
24 <a class="nav-link" href="#">Register</a>
25 <a class="nav-link" href="#">Products</a>
26 <a class="nav-link disabled" href="#">Account</a>
27 </div>
28 </div>
29 </nav>
30
31
32
33 <div class="mt-4 p-5 bg-primary text-white rounded">
34 <h1>Welcome to eStore</h1>
35 <p>Shop from Clothing to Electronics to Toys in Not Time !!</p>
36 </div>

```

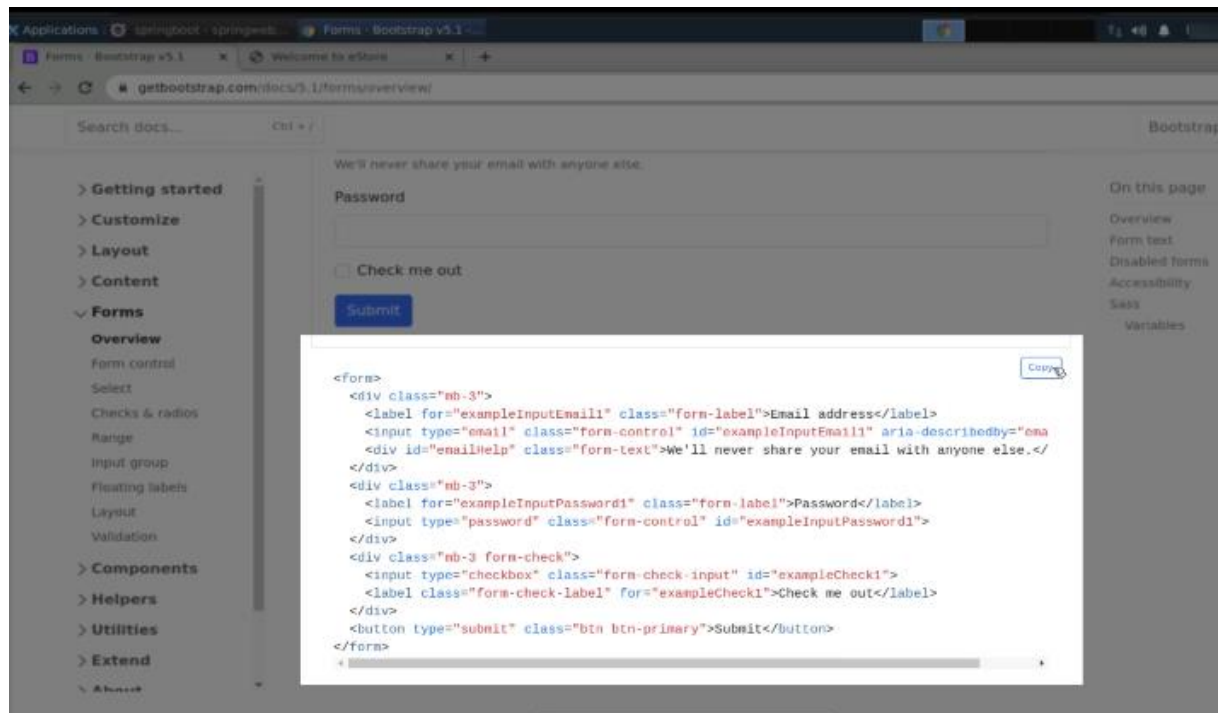
2.22 Update the reference for the class and refresh the webpage



2.23 Go to the **Forms** section in Bootstrap and select the overview part



2.24 Copy the code



2.25 Paste it in the HTML page, inside the **h3** tag under the login

```

springboot - springwebmvcdemo\src\main\webapp\index.html - Eclipse IDE
File Edit Source Navigate Search Project Run Window Help

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">
  <div class="navbar-nav">
    <a class="nav-link active" aria-current="page" href="#">Home</a>
    <a class="nav-link" href="#">Register</a>
    <a class="nav-link" href="#">Products</a>
    <a class="nav-link disabled" href="#">Account</a>
  </div>
</div>
</nav>

<div class="mt-4 p-5 bg-primary text-white rounded">
  <h1>Welcome to eStore</h1>
  <p>Shop from Clothing to Electronics to Toys in Not Time !!</p>
</div>

<h3>Login Here</h3>

<form>
  <div class="mb-3">
    <label for="exampleInputEmail" class="form-label">Email address</label>
    <input type="email" class="form-control" id="exampleInputEmail" aria-describedby="emailHelp">
    <div id="emailHelp" class="form-text">We'll never share your email with anyone else.</div>
  </div>
  <div class="mb-3">
    <label for="exampleInputPassword1" class="form-label">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1">
  </div>
  <div class="mb-3 form-check">
    <input type="checkbox" class="form-check-input" id="exampleCheck1">
    <label class="form-check-label" for="exampleCheck1">Check me out</label>
  </div>
  <button type="submit" class="btn btn-primary">Submit</button>
</form>
  
```

2.26 Write the **id** and **name** for the email and add the label **Enter Your Email**

```

<h3>Login Here</h3>

<form>
  <div class="mb-3">
    <label for="email" class="form-label">Enter Your Email</label>
    <input type="email" class="form-control" id="email" name="email" aria-describedby="emailHelp">
  </div>
  <div class="mb-3">
    <label for="exampleInputPassword1" class="form-label">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1">
  </div>
  <div class="mb-3 form-check">
    <input type="checkbox" class="form-check-input" id="exampleCheck1">
    <label class="form-check-label" for="exampleCheck1">Check me out</label>
  </div>
  <button type="submit" class="btn btn-primary">Submit</button>
</form>
  
```

2.27 Next, add a label as the **Password** and **add the id** for password

```

<h3>Login Here</h3>

<form>
  <div class="mb-3">
    <label for="email" class="form-label">Enter Your Email</label>
    <input type="email" class="form-control" id="email" name="email" aria-describedby="emailHelp">
  </div>
  <div class="mb-3">
    <label for="exampleInputPassword1" class="form-label">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1">
  </div>
  <div class="mb-3 form-check">
    <input type="checkbox" class="form-check-input" id="exampleCheck1">
    <label class="form-check-label" for="exampleCheck1">Check me out</label>
  </div>
  <button type="submit" class="btn btn-primary">Submit</button>
</form>
  
```

2.28 Add a login button

```
<h3>Login Here</h3>

<form>
<div class="mb-3">
<label for="email" class="form-label">Enter Your Email</label>
<input type="email" class="form-control" id="email" name="email" aria-describedby="emailHelp">
</div>
<div class="mb-3">
<label for="password" class="form-label">Enter Your Password</label>
<input type="password" class="form-control" id="password" name="password">
</div>
<button type="submit" class="btn btn-primary">LOGIN</button>
</form>
</div>
```

2.29 Now, refresh the browser and observe the changes

