

Pada tutorial 5 ini saya mempelajari :

1. Penggunaan For Looping

For looping digunakan untuk meringkas code program untuk menampilkan data. Bayangkan jika anda memiliki 1000 data dan tidak memakai for looping, maka anda harus menuliskan 1000 baris program untuk menampilkan seluruh data. Belum lagi jika ada data yang harus ditambah ataupun dihapus.

2. Penggunaan Conditional Expression

Selayaknya bahasa pemrograman lain, disini juga bisa menggunakan conditional expression untuk menentukan sesuatu.

3. Static File

Jika anda memiliki template bootstrap atau sejenisnya maka anda dapat menggunakannya sebagai static file.

4. Fragment

Untuk menjadikan kode program yang lebih efisien, anda dapat menggunakan fragment untuk menuliskan code yang sering dipakai.

5. Error Handler

Agar error yang ditampilkan lebih nyaman dan juga untuk meningkatkan UX, maka diperlukan error handler.

6. DataTables

Agar data anda bisa ditampilkan lebih baik, anda dapat menggunakan datatables.

Pertanyaan 1

The screenshot displays the Eclipse IDE environment on the left and a Chrome browser window on the right. The Eclipse IDE shows a project named 'com.example.tutorial5' with a package structure including 'src/main/resources/templates'. The 'viewall.html' file is open, showing an HTML template with a title 'View All Students' and a list of students. The code uses Thymeleaf's `th:class="${iterationStatus.odd} ? 'odd'"` to toggle the class of the list items. The console shows the application running on port 8080.

The Chrome browser window shows the rendered page at `localhost:8080/student/viewall`. The page title is 'All Students'. It lists two students: No. 1 (Royya Noor) and No. 2 (Noor). The first student's GPA is 4.2, and the second student's GPA is 3.3. The browser's developer tools are open, showing the HTML structure and the CSS styles applied to the elements.

HTML Structure:

```
<div>
  <a href="/student/delete/1706106652"> Delete Data</a>
  <br>
  <a href="/student/update/1706106652"> Update Data</a>
  <br>
  <h3>No. 1</h3>
  <h3>NPM = 1706106652</h3>
  <h3>Name = royya</h3>
  <h3>GPA = 4.2</h3>
</div>
<div class="odd">
  <a href="/student/delete/1706106654"> Delete Data</a>
  <br>
  <a href="/student/update/1706106654"> Update Data</a>
  <br>
  <h3>No. 2</h3>
  <h3>NPM = 1706106654</h3>
  <h3>Name = noor</h3>
  <h3>GPA = 3.3</h3>
</div>
</body>
</html>
```

CSS Styles:

```
body {
  display: block;
  margin: 8px;
}
```

Jawaban :

`${iterationStatus.odd}` merupakan sebuah kondisi yang mengecek apakah `iterationStatus` bernilai ganjil tau tidak.

Pertanyaan 2

The screenshot shows the Eclipse IDE interface with the 'viewall.html' file open. The code uses Thymeleaf's `th:unless` attribute to display a message based on a student's GPA. The console shows the application running successfully on localhost:8080. Below the IDE, a web browser displays the rendered HTML output.

```
1<!DOCTYPE html>
2<html xmlns:th="http://www.thymeleaf.org">
3  <head>
4    <title>View All Students</title>
5  </head>
6  <body>
7    <h1>All Students</h1>
8
9    <div th:each="student, iterationStatus: ${students}" th:class="${iterationStatus.odd} ? 'odd'">
10      <a th:href="/student/delete/" + ${student.npm}"> Delete Data</a><br/>
11      <a th:href="/student/update/" + ${student.npm}"> Update Data</a><br/>
12      <h3 th:text="No. " + ${iterationStatus.count}">No. 1</h3>
13      <h3 th:text="NPM = " + ${student.npm}">Student NPM</h3>
14      <h3 th:text="Name = " + ${student.name}">Student Name</h3>
15      <h3 th:text="GPA = " + ${student.gpa}">Student GPA</h3>
16      <h3 th:if="${student.gpa}>3.49">Cumlaude !</h3>
17      <h3 th:unless="${student.gpa}>3.49">Sangat Memuaskan !</h3>
18      <br/>
19    </div>
20  </body>
21</html>
22
```

Console Output:

```
com.example.tutorial5 - ApapTutorial05Application [Spring Boot App] C:\Program Files\Java\jdk1.8.0_151\bin\javaw.exe (13 Mar 2018 19:44:17)
2018-03-13 19:44:22.985 INFO 4912 --- [ restartedMain] com.example.ApapTutorial05Application : Started ApapTutorial05Application i
2018-03-13 19:44:30.999 INFO 4912 --- [nio-8080-exec-1] o.s.c.c.t.Tomcat.[localhost].[/] : Initializing Spring FrameworkServ
2018-03-13 19:44:30.999 INFO 4912 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : FrameworkServlet 'dispatcherServlet
2018-03-13 19:44:31.021 INFO 4912 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : FrameworkServlet 'dispatcherServlet
2018-03-13 19:44:31.052 INFO 4912 --- [nio-8080-exec-1] c.e.service.StudentServiceDatabase : select all students
2018-03-13 19:45:21.198 INFO 4912 --- [nio-8080-exec-8] c.e.service.StudentServiceDatabase : select all students
2018-03-13 19:52:48.265 INFO 4912 --- [nio-8080-exec-2] c.e.service.StudentServiceDatabase : select all students
```

Browser Output:

All Students

[Delete Data](#)
[Update Data](#)

No. 1

NPM = 1706106652

Name = royya

GPA = 4.2

Cumlaude !

[Delete Data](#)
[Update Data](#)

No. 2

NPM = 1706106654

Name = noor

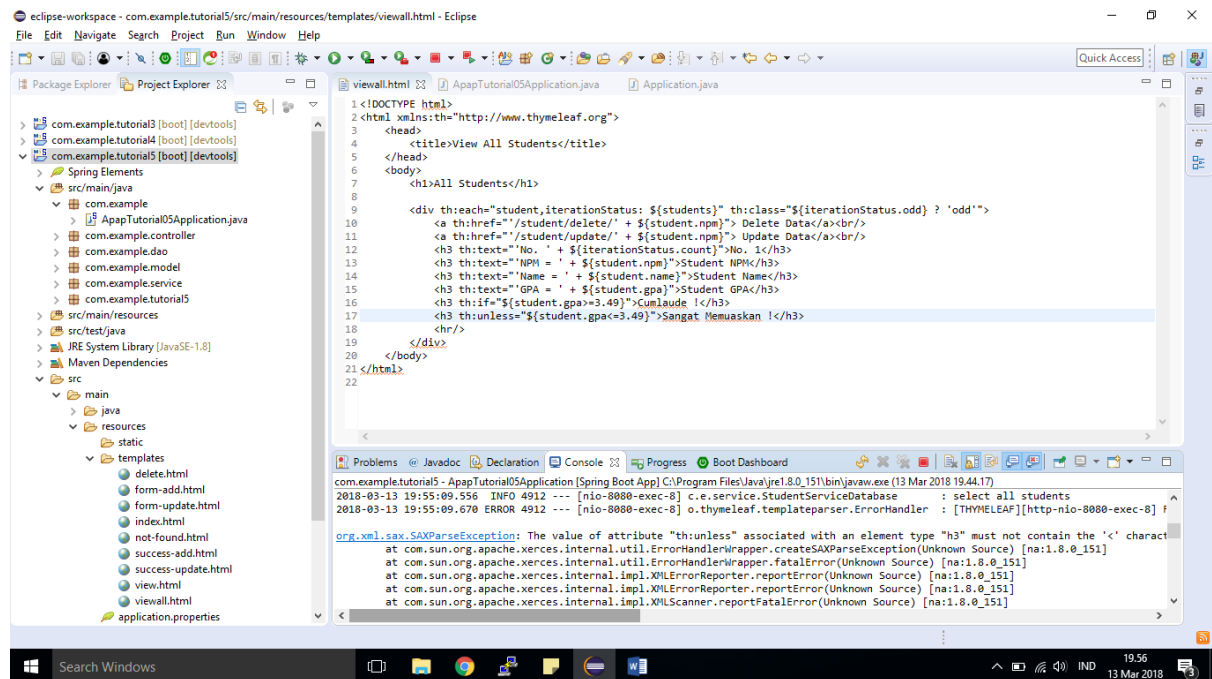
GPA = 3.3

Sangat Memuaskan !

Jawaban :

Karena unless merupakan kebalikan dari if, unless akan dijalankan jika kondisinya bernilai false.

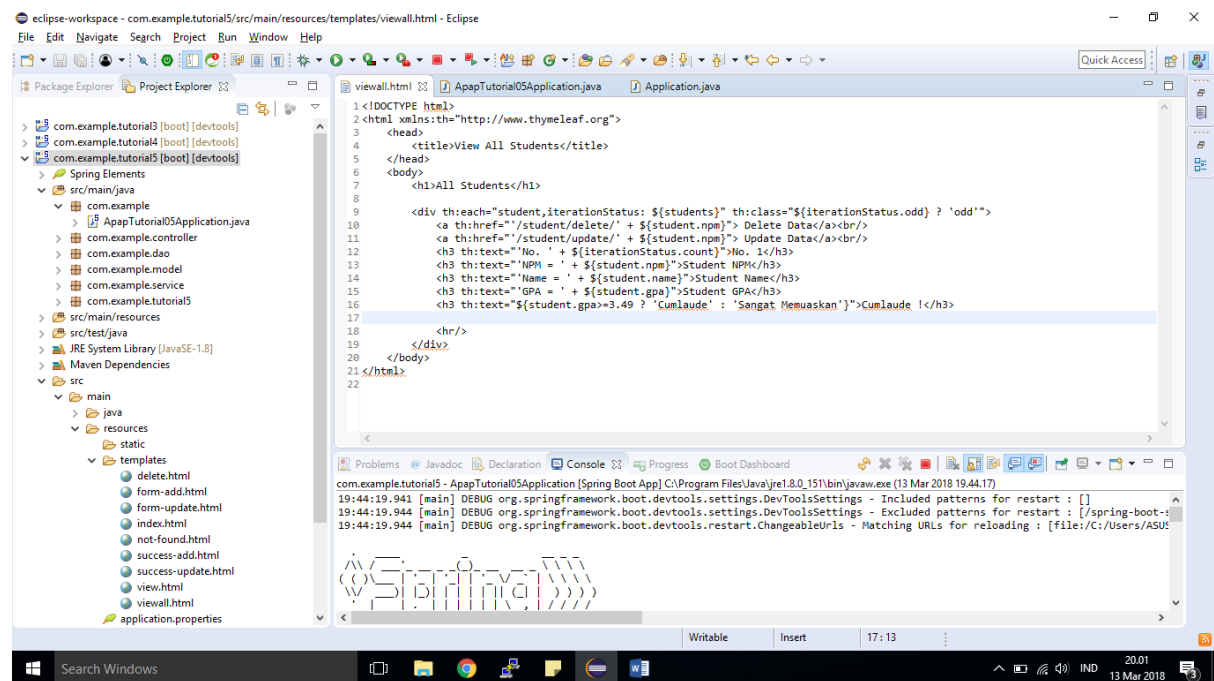
Pertanyaan 3 :



Jawaban :

Error, karena karakter '<' tidak dikenali oleh Thymeleaf.

Pertanyaan 4



Jawaban :

`${student.gpa >= 3.49 ? 'Cumlaude' : 'Sangat Memuaskan'}`

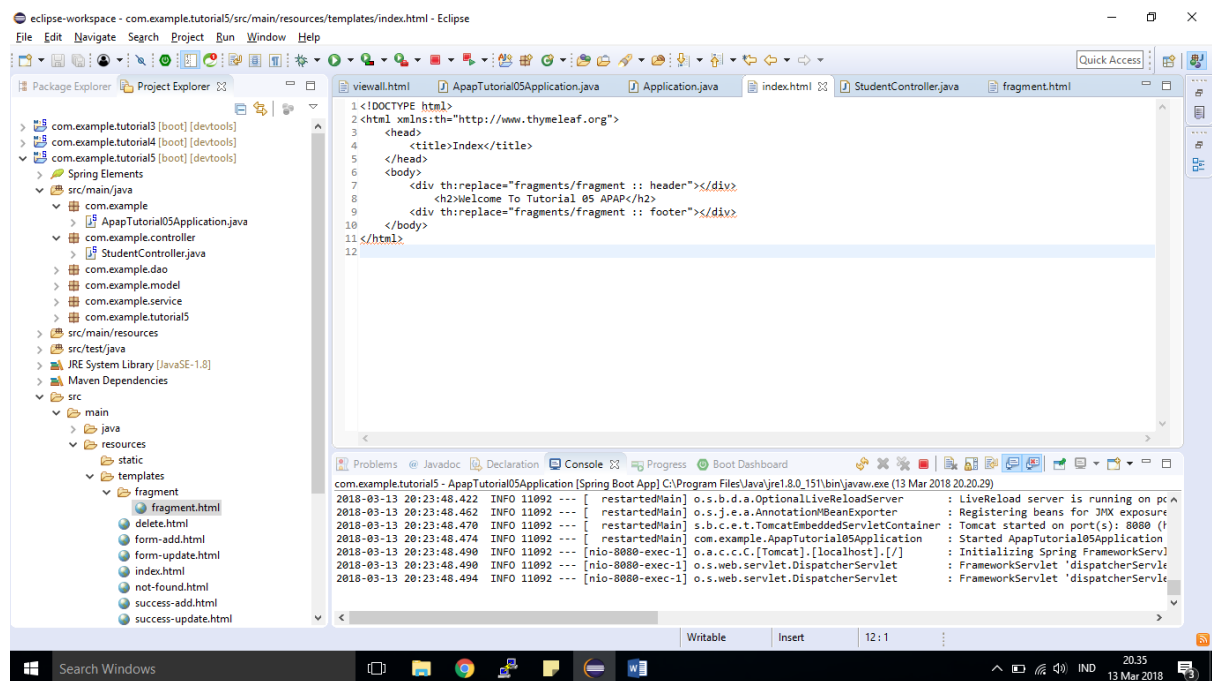
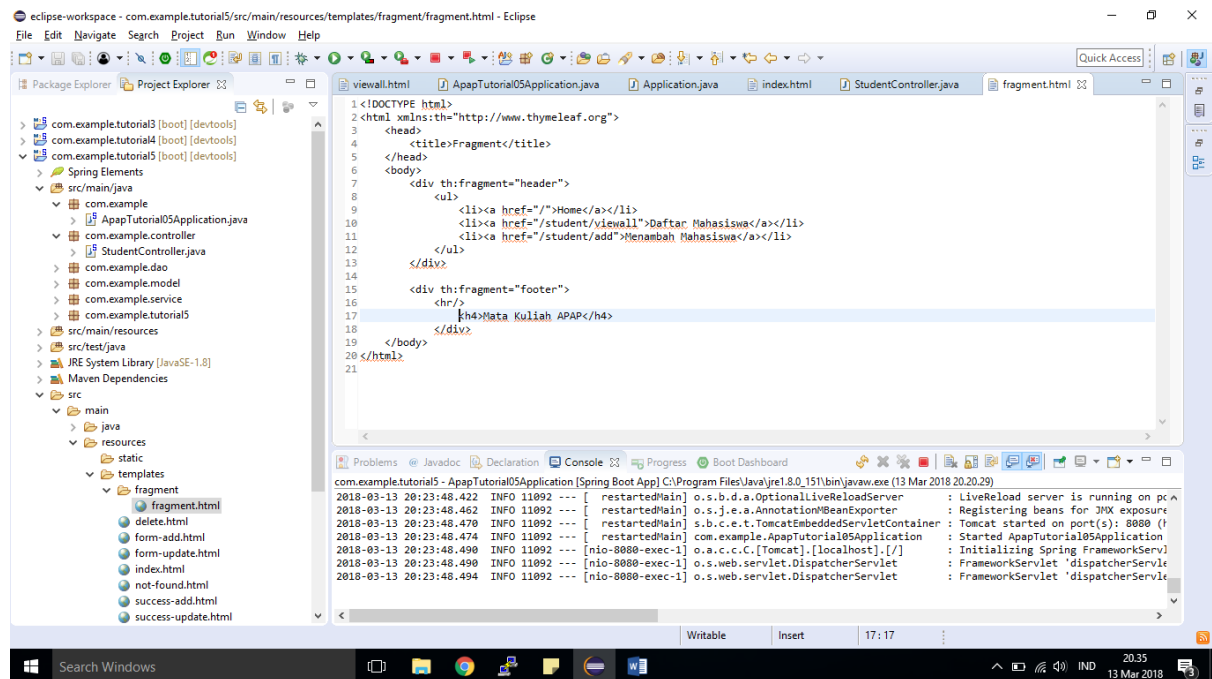
Static file

The screenshot displays the Eclipse IDE environment. The Package Explorer on the left shows the project structure, including the 'static' directory under 'resources'. The main editor shows the 'viewall.html' file, which contains HTML code for a navigation bar and a list of items. The console at the bottom shows the application running successfully on port 8080.

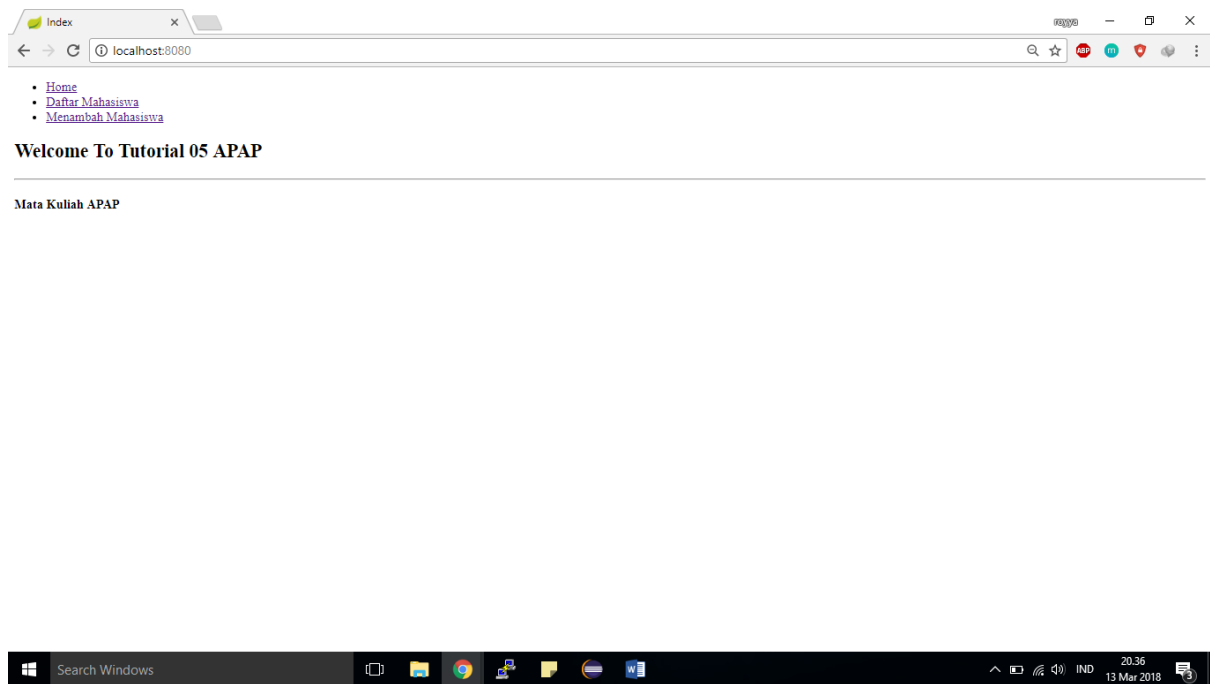
```
1<!DOCTYPE html>
2<html xmlns:th="http://www.thymeleaf.org">
3<head>
4<title>Index</title>
5<link rel="stylesheet" href="/css/bootstrap.min.css" />
6</head>
7<body>
8<nav class="navbar navbar-expand-lg navbar-dark bg-dark">
9<a class="navbar-brand" href="#">Navbar</a>
10<button class="navbar-toggler" type="button" data-toggle="collapse"
11data-target="#navbarSupportedContent"
12aria-controls="navbarSupportedContent"
13aria-expanded="false"
14aria-label="Toggle navigation">
15<span class="navbar-toggler-icon"></span>
16</button>
17<div class="collapse navbar-collapse" id="navbarSupportedContent">
18<ul class="navbar-nav mr-auto">
19<li class="nav-item">
20<a class="nav-link" href="/">Home</a>
21</li>
22<li class="nav-item">
23<a class="nav-link" href="/student/viewall">Daftar Mahasiswa</a>
24</li>
25</ul>
26</div>
27</body>
28</html>
```

The web browser shows the rendered page with a navigation bar and the text "Welcome To Tutorial 05 APAP".

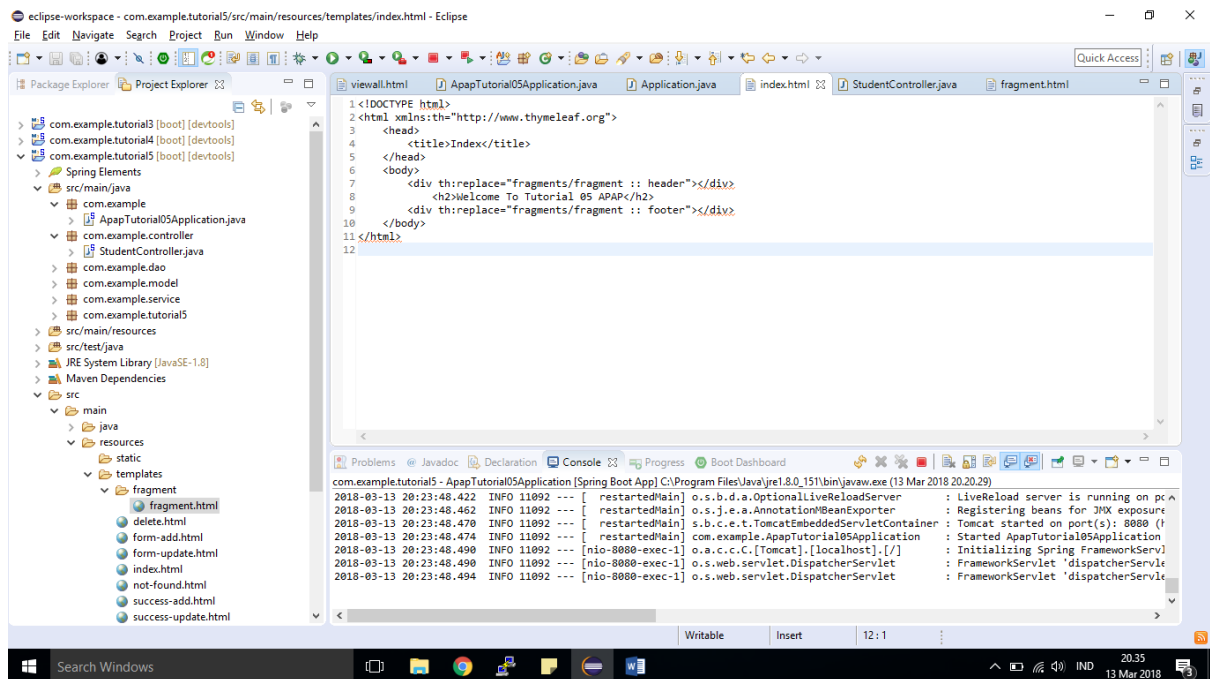
Fragment



[Ar Royya Noor Gunadi Ahmad] [1706106652] [Ekstensi]



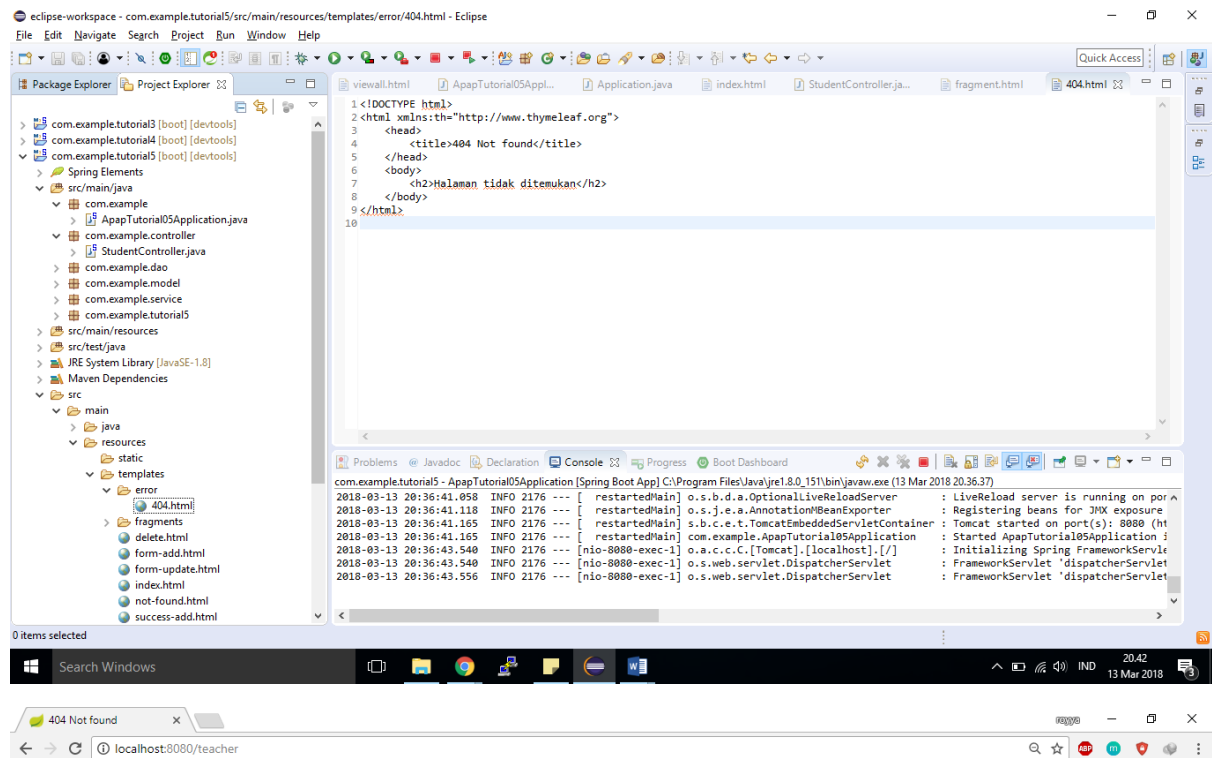
Pertanyaan 5



Jawaban :

Syntax tersebut digunakan untuk mensisipkan fragment yang telah kita buat.

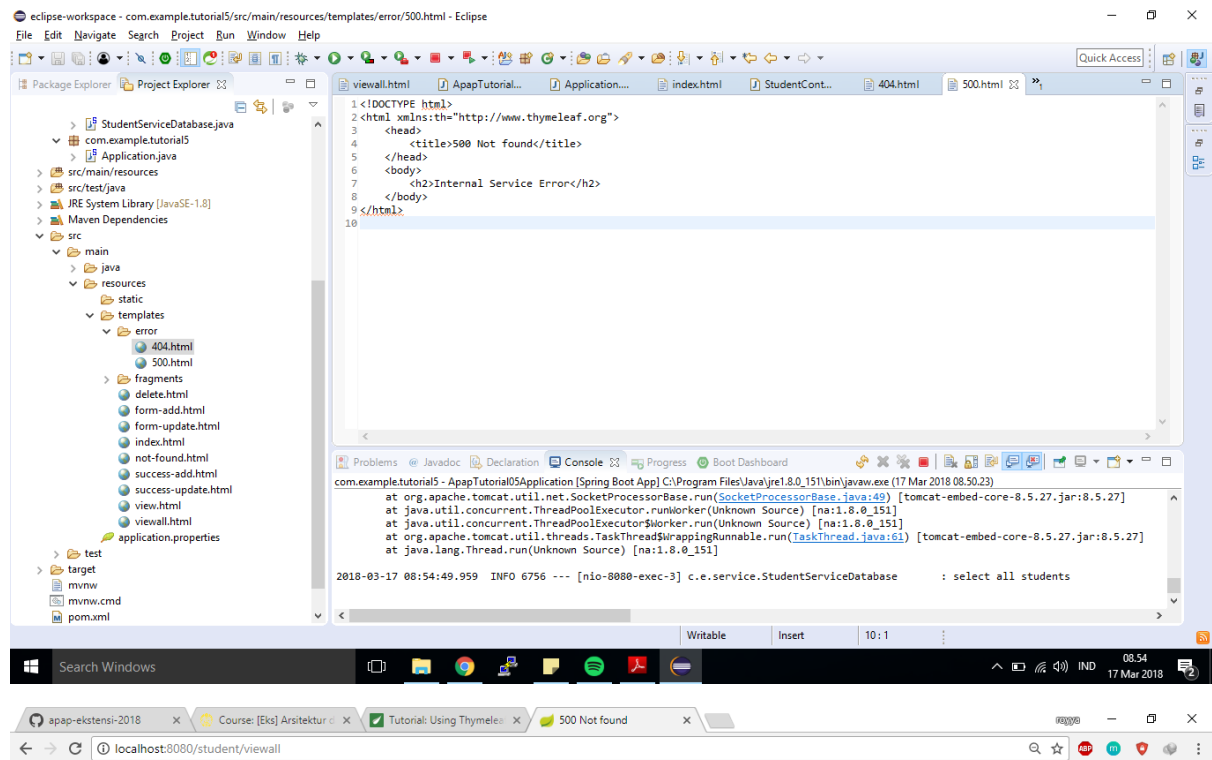
Error 404



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Pertanyaan 6



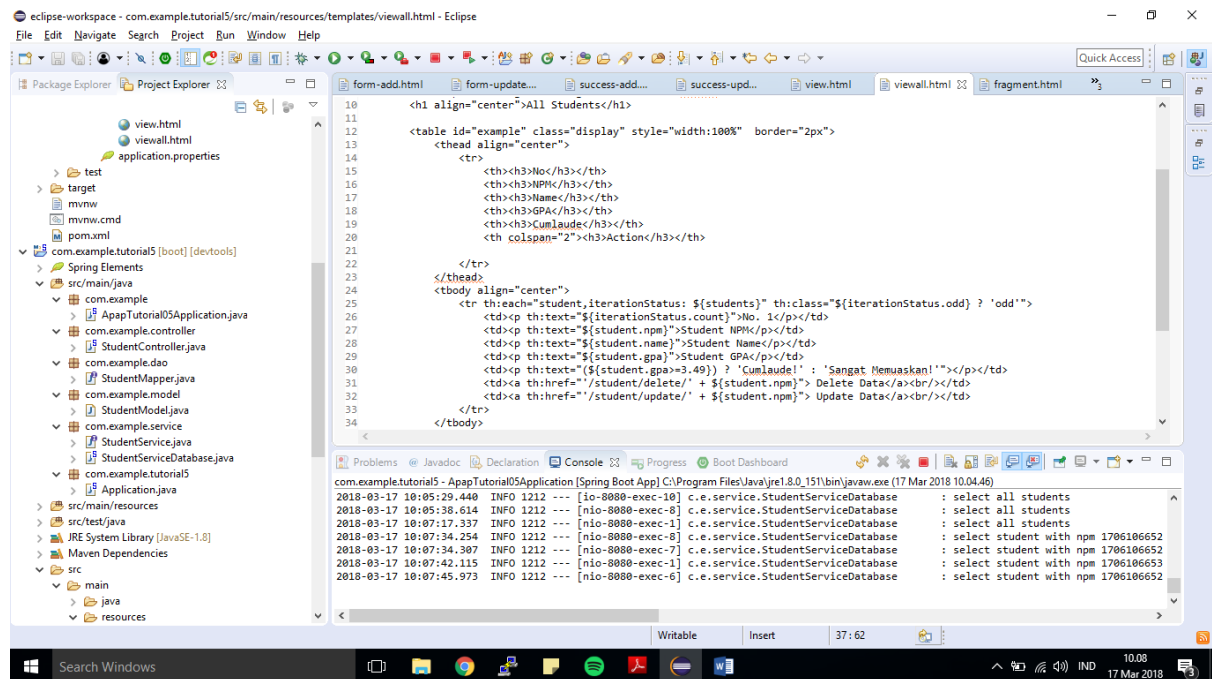
Internal Service Error



Jawaban :

Berlaku

Latihan 1



Navbar Home Daftar Mahasiswa Menambah Mahasiswa Search

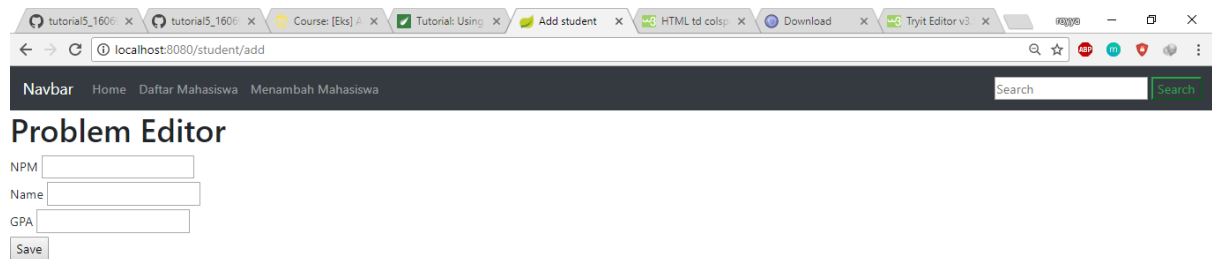
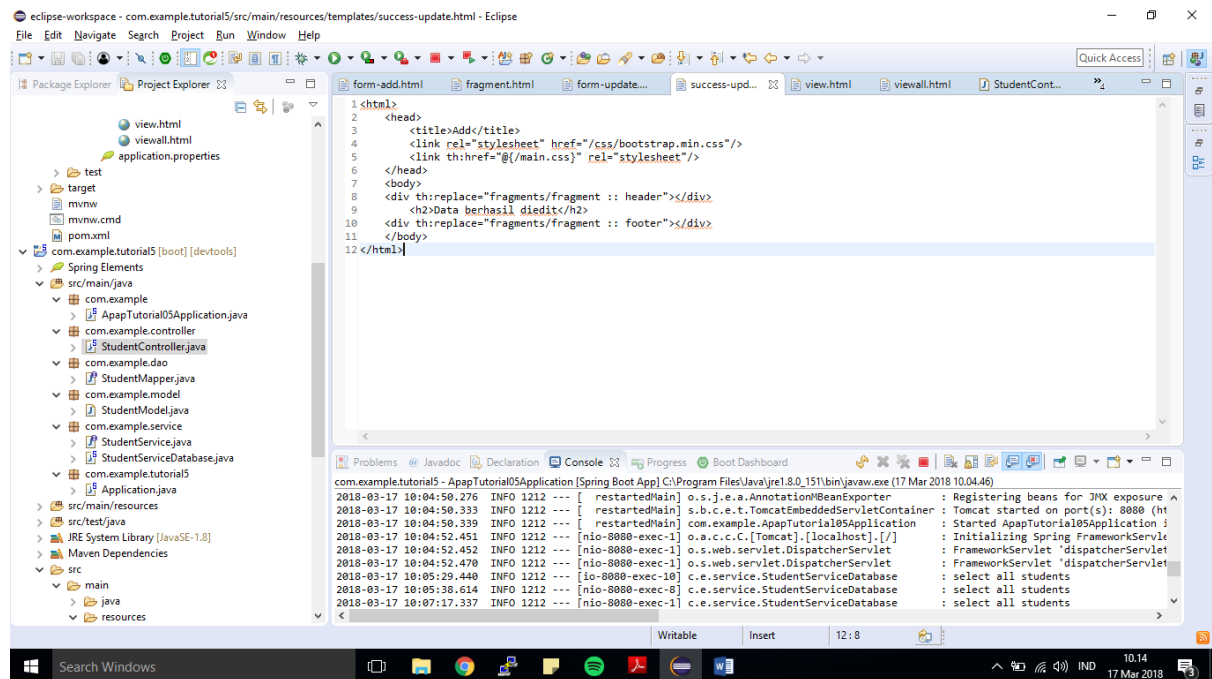
All Students

No	NPM	Name	GPA	Cumlaude	Action	
1	1706106652	royya	4.2	Cumlaude!	Delete Data	Update Data
2	1706106654	noor	3.3	Sangat Memuaskan!	Delete Data	Update Data

Mata Kuliah APAP



Latihan 2



Mata Kuliah APAP

