

Project Hello World

1. Ganti baris tersebut menjadi @RequestMapping("/hello123")

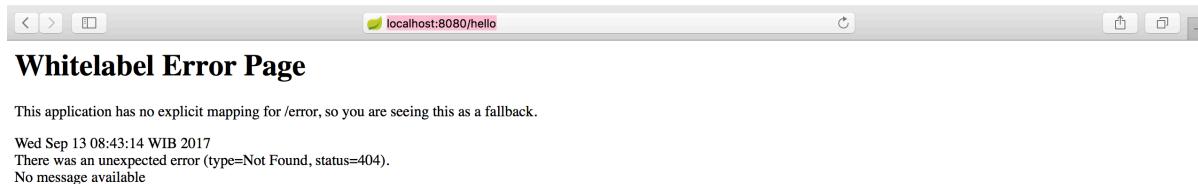
Pertanyaan: Apakah compile error? Tidak

```
1 package com.example.demo.controller;
2
3 import org.springframework.stereotype.Controller;
4 import org.springframework.web.bind.annotation.RequestMapping;
5
6 @Controller
7 public class PageController {
8
9     @RequestMapping("/hello123")
10    public String index() {
11        return "hello";
12    }
13
14 }
15
16
```

Console output:

```
2017-09-13 08:44:23.452 INFO 2093 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL for [/hello123] onto handler 'PageController.index()' (via [DispatcherServlet])
2017-09-13 08:44:23.452 INFO 2093 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL for [/error] onto handler 'WhitelabelErrorController.error()' (via [DispatcherServlet])
2017-09-13 08:44:23.500 INFO 2093 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL for [/favicon.ico] onto handler 'WhitelabelErrorController.error()' (via [DispatcherServlet])
2017-09-13 08:44:24.067 INFO 2093 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 3567
2017-09-13 08:44:24.128 INFO 2093 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Registering beans for exposure...
2017-09-13 08:44:24.202 INFO 2093 --- [ restartedMain] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat started on port(s): 8080 (http)
2017-09-13 08:44:24.213 INFO 2093 --- [ restartedMain] com.example.CobaApplication : Started CobaApplication in 0.493 seconds (JVM: 1.8.0_121)
```

Jika tidak, stop Spring Boot yang sedang berjalan, run kembali dan buka localhost: 8080/hello apa yang terjadi? Whitelabel error page



2. Ganti nama method index() dengan nama method hello()

Pertanyaan: Apakah compile error? Tidak

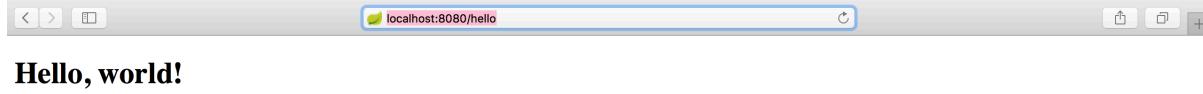
The screenshot shows the Eclipse IDE interface. In the top left, the Project Explorer view lists several projects and files. The central part of the screen displays a code editor with Java code for a Spring Boot controller:

```
1 package com.example.demo.controller;
2
3 import org.springframework.stereotype.Controller;
4 import org.springframework.web.bind.annotation.RequestMapping;
5
6 @Controller
7 public class PageController {
8
9     @RequestMapping ("/hello")
10    public String hello()
11    {
12        return "hello";
13    }
14 }
15
16
```

Below the code editor is the Console view, which shows the application's startup logs:

```
Coba - CobaApplication [Spring Boot App] /Library/Java/JavaVirtualMachines/jdk1.8.0_121.jdk/Contents/Home/bin/java (Sep 15, 2017, 10:45:32 PM)
2017-09-15 22:45:37.516 INFO 2881 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "["
2017-09-15 22:45:37.517 INFO 2881 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "{"
2017-09-15 22:45:37.560 INFO 2881 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-15 22:45:37.560 INFO 2881 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-15 22:45:37.608 INFO 2881 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-15 22:45:38.118 INFO 2881 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload
2017-09-15 22:45:38.168 INFO 2881 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Registerin
2017-09-15 22:45:38.246 INFO 2881 --- [ restartedMain] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat sta
2017-09-15 22:45:38.257 INFO 2881 --- [ restartedMain] com.example.CobaApplication : Started Cc
```

Jika tidak, Stop Spring Boot yang sedang berjalan, run kembali dan buka localhost: 8080/hello
apakah page hello sebelumnya masih muncul? Masi



3. Ganti string return type menjadi return "hello123";

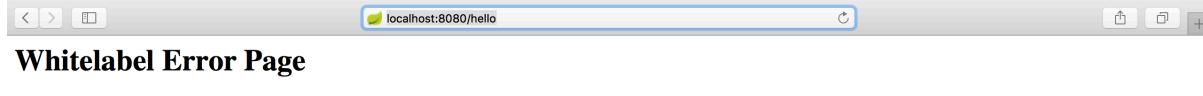
Pertanyaan: Apakah compile error? Tidak

```
1 package com.example.demo.controller;
2
3 import org.springframework.stereotype.Controller;
4 import org.springframework.web.bind.annotation.RequestMapping;
5
6 @Controller
7 public class PageController {
8
9     @RequestMapping ("hello")
10    public String index()
11    {
12        return "hellp123";
13    }
14 }
```

Console

```
2017-09-15 22:51:40.687 INFO 3288 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "[{" 2017-09-15 22:51:40.688 INFO 3288 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "[{" 2017-09-15 22:51:40.727 INFO 3288 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL 2017-09-15 22:51:40.727 INFO 3288 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL 2017-09-15 22:51:40.778 INFO 3288 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL 2017-09-15 22:51:41.399 INFO 3288 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload 2017-09-15 22:51:41.461 INFO 3288 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Registerin 2017-09-15 22:51:41.551 INFO 3288 --- [ restartedMain] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat sta 2017-09-15 22:51:41.559 INFO 3288 --- [ restartedMain] com.example.CobaApplication : Started Cc
```

Jika tidak, Stop Spring Boot yang sedang berjalan, run kembali dan buka **localhost: 8080/hello**
apakah page hello sebelumnya masih muncul? Tidak



Kembalikan return type menjadi "hello"

Pertanyaan: Menandakan apakah String yang di-return tersebut? Memanggil file html yang terdapat pada src/main/resource >> template.

Request Parameter (Query String)

1. Ubah nilai anotasi RequestMapping dari "/greeting" menjadi "/hello/greeting"

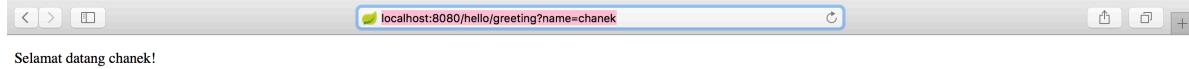
The screenshot shows the Eclipse IDE interface. The Project Explorer view on the left displays several projects and their files, including 'a6' and 'Coba'. The Java Editor view in the center contains the code for the 'PageController' class, which includes annotations for RequestMapping and RequestParam. The Console view at the bottom shows log entries from the application's startup.

```
4 import org.springframework.ui.Model;
5 import org.springframework.web.bind.annotation.RequestMapping;
6 import org.springframework.web.bind.annotation.RequestParam;
7
8 @Controller
9 public class PageController {
10
11     @RequestMapping("/hello")
12     public String index() {
13         return "hello";
14     }
15
16     @RequestMapping( "/hello/greeting")
17     public String greeting (@RequestParam(value="name") String name, Model model)
18     {
19         model.addAttribute ("name",name);
20         return "greeting";
21     }
22 }
```

```
2017-09-15 23:21:09.277 INFO 5186 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "["
2017-09-15 23:21:09.278 INFO 5186 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "{"
2017-09-15 23:21:09.317 INFO 5186 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-15 23:21:09.317 INFO 5186 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-15 23:21:09.364 INFO 5186 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-15 23:21:09.830 INFO 5186 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload
2017-09-15 23:21:09.879 INFO 5186 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Registerin
2017-09-15 23:21:09.946 INFO 5186 --- [ restartedMain] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat sta
2017-09-15 23:21:09.955 INFO 5186 --- [ restartedMain] com.example.CobaApplication : Started Cc
```

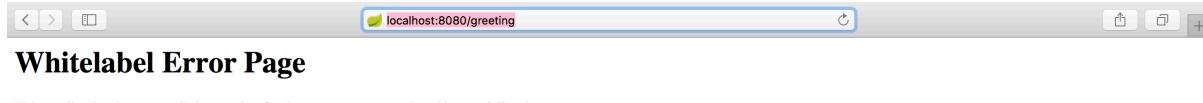
Buka **localhost: 8080/hello/greeting?name=chanek**

Pertanyaan: apakah hasilnya? Menampilkan isi dari page greeting



2. Akses **localhost: 8080/greeting**

Pertanyaan: Apakah hasilnya? Whitelabel Error Page



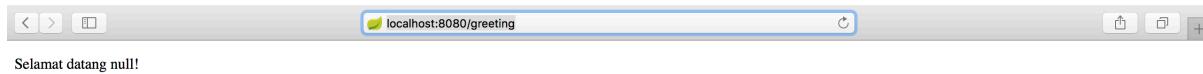
Ubah header method greeting menjadi seperti berikut

```

5 import org.springframework.web.bind.annotation.RequestMapping;
6 import org.springframework.web.bind.annotation.RequestParam;
7
8 @Controller
9 public class PageController {
10
11     @RequestMapping("/hello")
12     public String index() {
13         return "hello";
14     }
15
16     @RequestMapping( "/greeting")
17     public String greeting (@RequestParam (value = "name" , required = false) String name, Model model) {
18
19         model.addAttribute ("name",name);
20         return "greeting";
21     }
22 }

```

Lalu, akses dengan localhost: 8080/greeting



Selamat datang null!

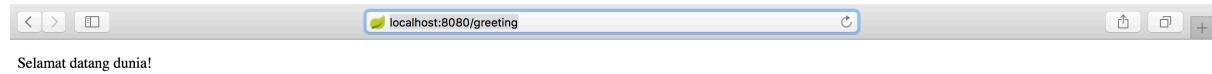
3. Ubah header menjadi seperti berikut

```

1 package com.example.demo.controller;
2
3 import org.springframework.stereotype.Controller;
4 import org.springframework.ui.Model;
5 import org.springframework.web.bind.annotation.RequestMapping;
6 import org.springframework.web.bind.annotation.RequestParam;
7
8 @Controller
9 public class PageController {
10
11     @RequestMapping("/hello")
12     public String index() {
13         return "hello";
14     }
15
16     @RequestMapping( "/greeting")
17     public String greeting (@RequestParam(value="name",required=falsedefaultValue="dunia")String name,Model model)
18
19         model.addAttribute ("name",name);
20         return "greeting";
21     }
22 }

```

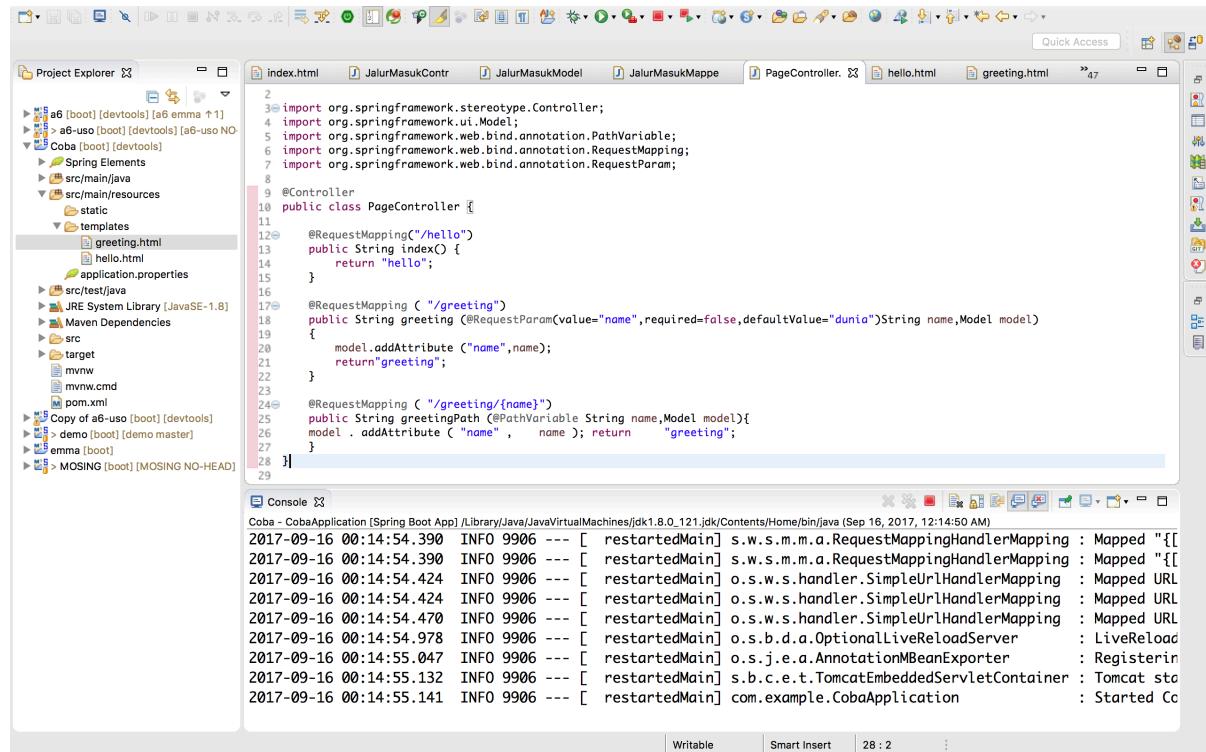
Apakah hasilnya?



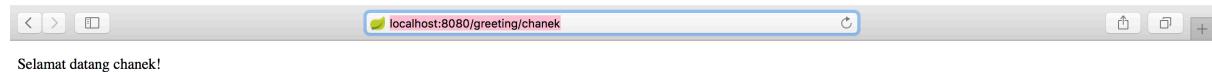
Pertanyaan : Mengapa tulisan “Sapaan untuk user” tidak pernah muncul?

Karena menggunakan thymeleaf, jadi operasi yang terbaca hanya yang terdapat pada syntax **th:text** saja.

Path Variable

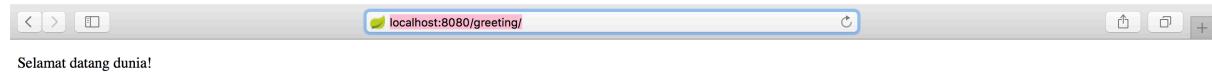


localhost: 8080/greeting/chaneck



1. Akses **localhost:8080/greeting/**

Pertanyaan: Apa hasilnya?



Ubah method greetingPath

The screenshot shows the Eclipse IDE interface. The Project Explorer tab on the left lists several projects and their components. The Java Editor tab in the center displays a Java controller class named `PageController.java`. The code defines three methods: `index()`, `greeting(@RequestParam(value = "name", required = false, defaultValue = "dunia") String name, Model model)`, and `greetingPath(@PathVariable Optional<String> name, Model model)`. The Console tab at the bottom shows application logs from `CobaApplication`.

```

8 import org.springframework.web.bind.annotation.RequestMapping;
9 import org.springframework.web.bind.annotation.RequestParam;
10
11 @Controller
12 public class PageController {
13
14     @RequestMapping("/hello")
15     public String index() {
16         return "hello";
17     }
18
19     @RequestMapping("/greeting")
20     public String greeting(@RequestParam(value = "name", required = false, defaultValue = "dunia") String name,
21                           Model model) {
22         model.addAttribute("name", name);
23         return "greeting";
24     }
25
26     @RequestMapping(value = {"/greeting", "greeting/{name}"})
27     public String greetingPath(@PathVariable Optional<String> name, Model model) {
28         if(name.isPresent()) {
29             model.addAttribute("name", name.get());
30         } else {
31             model.addAttribute("name", "dengklek");
32         }
33         return "greeting";
34     }
35 }

```

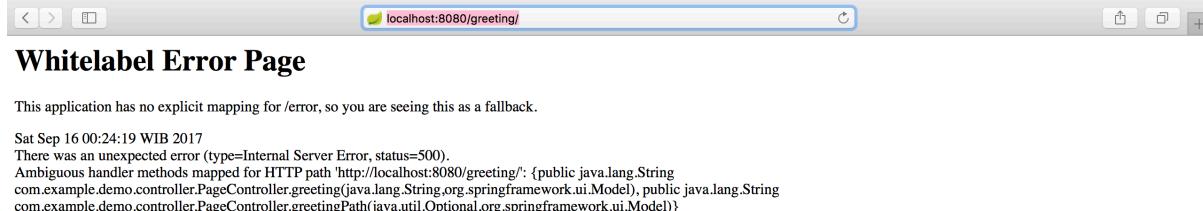
```

2017-09-16 00:23:46.300 INFO 9906 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "["
2017-09-16 00:23:46.300 INFO 9906 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "["
2017-09-16 00:23:46.307 INFO 9906 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-16 00:23:46.308 INFO 9906 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-16 00:23:46.318 INFO 9906 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL
2017-09-16 00:23:46.378 INFO 9906 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload
2017-09-16 00:23:46.458 INFO 9906 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Register
2017-09-16 00:23:46.467 INFO 9906 --- [ restartedMain] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat sta
2017-09-16 00:23:46.469 INFO 9906 --- [ restartedMain] com.example.CobaApplication : Started C

```

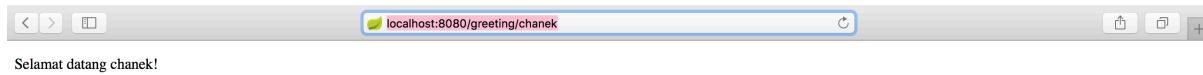
2. Akses `localhost:8080/greeting/`

Pertanyaan : Apakah hasilnya? Whitelabel Error Page



3. Akses `localhost:8080/greeting/chaneck`

Pertanyaan : Apakah hasilnya?



LATIHAN

- Buatlah satu halaman baru untuk melakukan operasi perkalian.
- Halaman ini menerima **2 buah** parameter dari query string yaitu a dan b.

Saya membuat file `Perkalian.html` untuk mengoperasikan perkalian. Berikut adalah isi dari file `Perkalian.html` saya. `Perkalian.html` menerima 2 parameter yaitu a dan b. Selanjutnya, a dan b dioperasikan perkalian dengan `${a*b}`.

The screenshot shows the Eclipse IDE interface. The Project Explorer view on the left lists several Java projects and their files. The Editor view in the center displays the file `Perkalian.html` containing Thymeleaf template code. The code includes a title "Exercise Page", an h1 tag with the text "Perkalian", and a paragraph with a Thymeleaf expression `th:text="$a + 'x' + $b + '=' + ${a*b}"`. The Console view at the bottom shows the application's startup logs, indicating successful deployment and startup of the Spring Boot application.

```

<!DOCTYPE html>
<html xmlns:th="http://www.thymeleaf.org">
<head>
<title>Exercise Page</title>
</head>
<body>
<h1>Perkalian</h1>
<p><th:text=$a + 'x' + $b + '=' + ${a*b}></p>
</body>
</html>

```

Pada file Controller, saya menambahkan Request Mapping untuk /Perkalian sebagai berikut :

The screenshot shows the Eclipse IDE interface. The Project Explorer view on the left lists several Java projects and their files. The Editor view in the center displays the file `PageController.java`. It contains two new `@RequestMapping` annotations: one for the path `/greeting` and another for the path `/Perkalian`. The `/greeting` mapping includes a parameter `name` with a default value of `dunia`. The `/Perkalian` mapping includes parameters `a` and `b` with default values of 0. The Console view at the bottom shows the application's startup logs, indicating successful deployment and startup of the Spring Boot application.

```

    @RequestMapping("/greeting")
    public String greeting(@RequestParam(value = "name", required = false, defaultValue = "dunia") String name,
                           Model model) {
        model.addAttribute("name", name);
        return "greeting";
    }

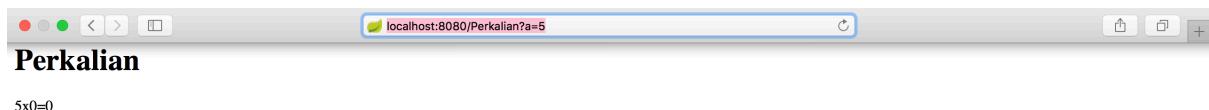
    @RequestMapping (value = {"/greeting", "/Perkalian"})
    public String greetingPath(@PathVariable Optional <String> name, Model model) {
        if(name.isPresent()) {
            model . addAttribute ( "name" , name . get () );
        } else {
            model . addAttribute ( "name" , "dengklek" );
        }
        return "greeting";
    }

    @RequestMapping ("Perkalian")
    public String perkalian(
            @RequestParamValue = "a", required = false, defaultValue= "0") Integer a, Model model,
            @RequestParamValue = "b", required = false, defaultValue= "0") Integer b, Model model2)
    {
        model.addAttribute ("a", a);
        model2.addAttribute ("b", b);
        return "Perkalian";
    }

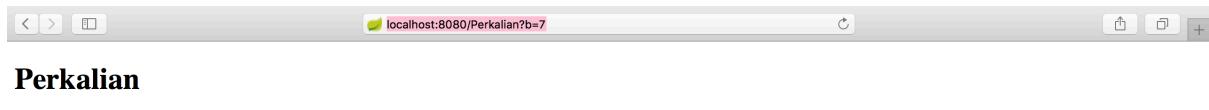
```

Saya menambahkan parameter a dan parameter b, dimana a dan b memiliki default 0. Jadi, jika a atau b tidak diinput nilainya maka otomatis nilainya adalah 0. Berikut beberapa tampilan hasil perkalian a dan b.

1. Akses : **localhost:8080/Perkalian?a=5**



2. Akses : **localhost:8080/Perkalian?b=7**



3. Akses : **localhost:8080/Perkalian?a=2&b=9**

