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How to Make a Simple RestController in Spring Boot?

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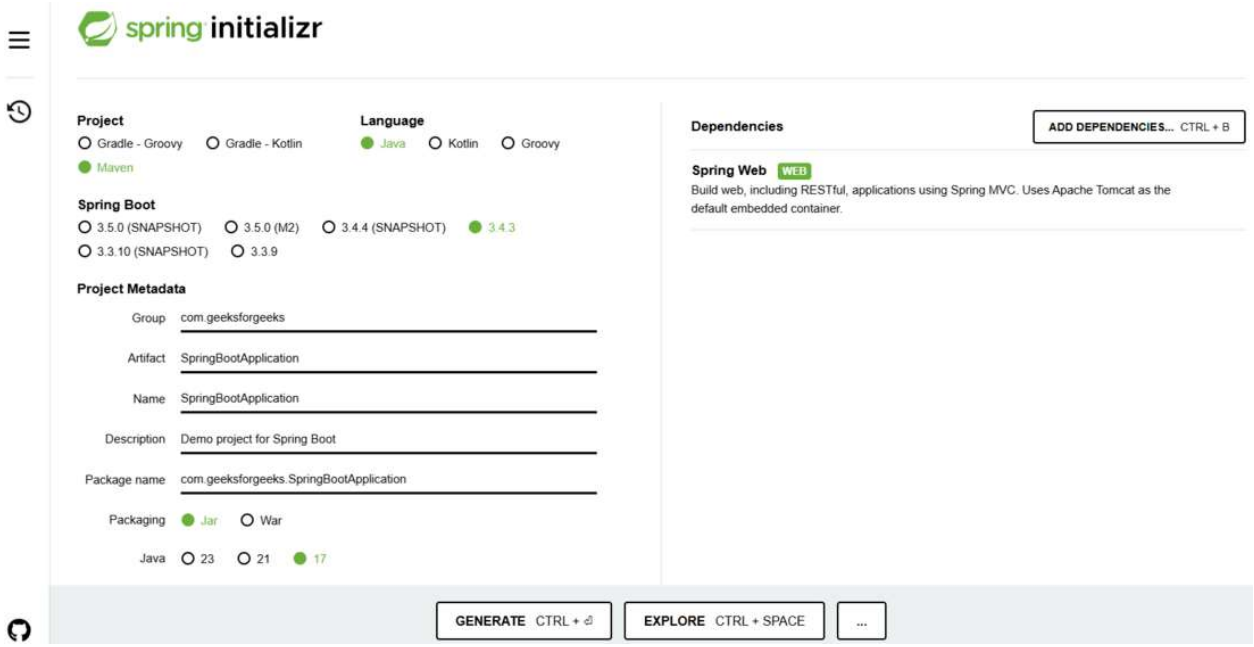
A **RestController in Spring Boot** is a specialized controller that is used to develop **RESTful web services**. It is marked with the **@RestController** annotation, which combines **@Controller** and **@ResponseBody**. This ensures that the response is automatically converted into **JSON or XML**, eliminating the need for explicit response conversions. In this article, we will explore **how to create a simple RestController in Spring Boot**.

Steps to Create a Simple RestController in Spring Boot

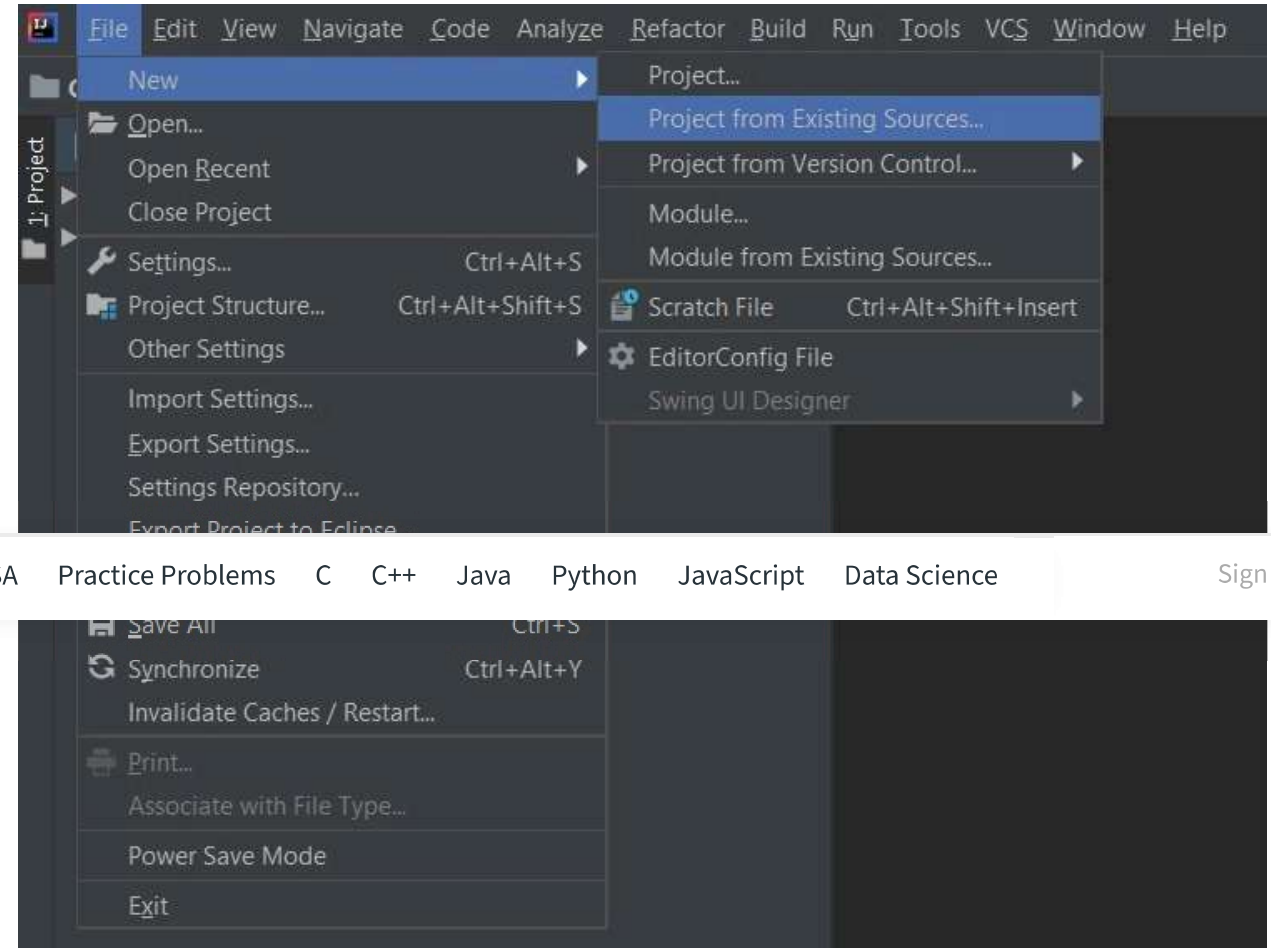
Step 1: Setup Spring Boot Project Using Spring Initializr

- Go to Spring Initializr.
- Configure the project with the following details:
  - **Project**: Maven
  - **Language**: Java
  - **Spring Boot Version:** 3.x (Latest Version)
  - **Packaging**: JAR
  - **Java Version**: 17 or later
  - **Dependencies**: Spring Web
- Click on **Generate** to download the project.



Step 2: Import the Project into Your IDE

Extract the zip file. Now open a suitable IDE and then go to **File > New > Project from existing sources** and select **pom.xml**. Click on import changes on prompt and wait for dependencies to load.



Note: In the Import Project for Maven window, make sure you choose the same version of JDK which you selected while creating the project.

Step 3: Create a Simple RestController

Go to **src > main > java > com.geeksforgeeks.SpringBootApplication**, create a new Java class with the name **Controller.java** and add the annotation @RestController.

Controller.java:

```
package com.geeksforgeeks.SpringBootApplication.controller;

import org.springframework.web.bind.annotation.*;

@RestController
@RequestMapping("/api")
public class Controller {

    @GetMapping("/hello/{name}/{age}")
    public String sayHello(@PathVariable String name, @PathVariable int age)
```

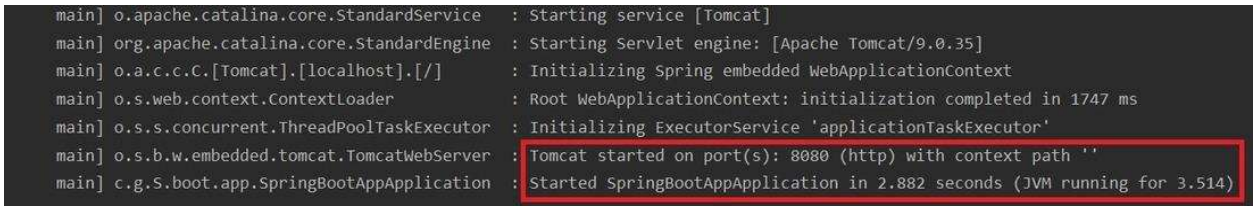
```
{
        return "Hello, " + name + "! You are " + age + " years old.";
    }
}
```

Explanation:

- @RestController annotation marks this class as a RESTful controller.
- @RequestMapping("/api") defines a base URL for all endpoints inside this controller.
- @GetMapping("/hello/{name}/{age}") handles HTTP GET requests and extracts name and age from the URL.
- @PathVariable annotation captures dynamic values from the request URL.
- Returns a simple JSON response with a greeting message.

Step 4: Run the Spring Boot Application

Run the main class and wait for the Tomcat server to start.



Note: The default port of the Tomcat server is 8080 and can be changed in the application.properties file.

This **Controller.java** file is used for handling all incoming requests from the client-side.

Once the application starts, test the API by opening a browser or using Postman:

http://localhost:8080/api/hello/Sweta/25

Response:

"Hello, Sweta! You are 25 years old."