

SOEN 487: Web Services and Applications

Lab Instructions

A REST Hello World Service

January 13, 2022

1 General Information

Lab Date: Wednesday, January 19th, 2022.

Your lab instructor will provide you with instructions on how to do this lab activity.

2 Introduction

The purpose of this lab is to create a RESTful web service using JAX-RS. This lab will be performed individually, and at the end, you will demonstrate your results as outlined, to your lab instructor.

3 Project Setup

There are 2 ways to set up the Grizzly web server.

1. Generate a template using the following maven command:

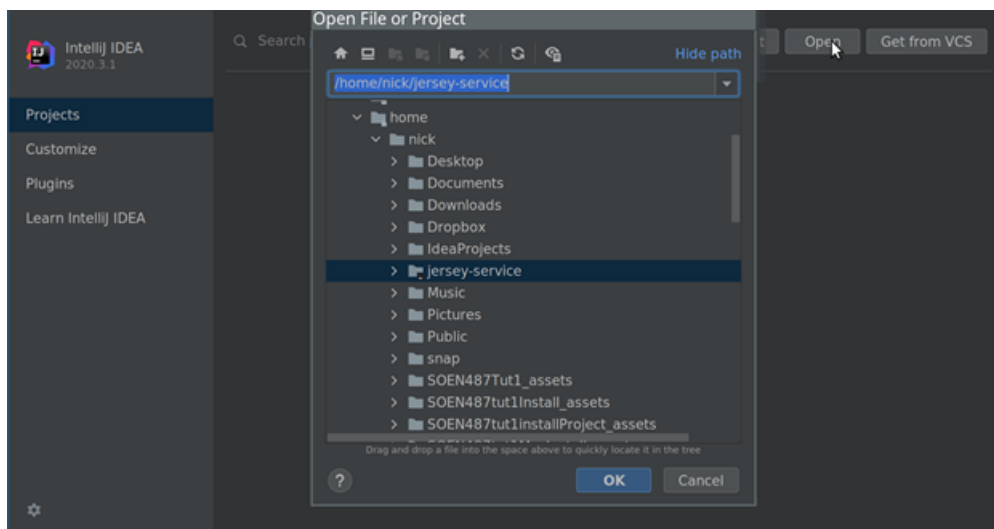
```
mvn archetype:generate -DarchetypeArtifactId=jersey-quickstart-grizzly2
-DarchetypeGroupId=org.glassfish.jersey.archetypes -DinteractiveMode=false
-DgroupId=com.example.rest -DartifactId=jersey-service
-Dpackage=com.example.rest -DarchetypeVersion=2.17
```

2. Clone the template from the first tutorial on Github:

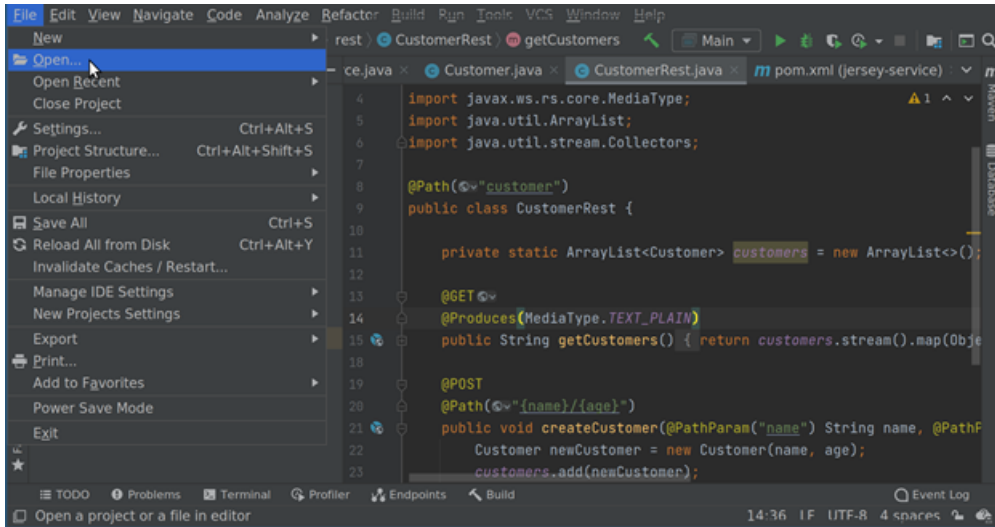
<https://github.com/SOEN487/T01>

4 Opening the Project with IntelliJ IDEA

If you don't have a project open already, you can open a new one by clicking on open on the top right of your window and then proceed to choose the location where the directory of your generated template is located.



If a project is already open, you may open a new one by navigating to the top left of your IDE, clicking on File and, subsequently on open. It will then be possible to navigate to the location of your generated web server template, to open it.



5 Instructions

Create a class called Book that will contain:

- A “title” of type String
- A “author” of type String
- A “isbn” of type String

It should have the appropriate getters and setters for the class.

Next, build an API to interact with this class by:

- Creating a new class to hold the REST API endpoints with a path of “Library”
- Creating an ArrayList and using that to store Books.
- Create an endpoint for a PUT request that would replace an entry in the Arraylist or add a new entry if the Book does not exist.
- Create an endpoint for a GET request that will return a specific book by “title” or an empty string, if it doesn’t exist in the ArrayList.

6 Testing the REST API

To demonstrate that the API works, open up Postman and a terminal window. Using these tools, you will need to make GET and PUT requests to your API to demonstrate that it works. Then show your results to your lab instructor.

References

1. REST with Java (JAX-RS) using Jersey:

<https://www.vogella.com/tutorials/REST/article.html>