

SECTION 1 — Install OpenAPI Generator (via pip only)

1. Install generator

```
pip install openapi-generator-cli
```

Verify installation:

```
openapi-generator-cli version
```

SECTION 2 — Python (Flask) Server Setup

Step 1 — Generate Python Flask server

```
openapi-generator-cli generate -i api_docs.yaml -g python-flask -o flask_server
```

This creates a folder called flask_server.

Step 3 — Create virtual environment using Python 3.10

Go inside generated folder:

```
cd flask_server
```

Create venv:

```
py -3.x(Your python 3.x version) -m venv venv
```

Step 4 — Activate virtual environment

On Windows: venv\Scripts\activate

You should see (venv) in your terminal.

Step 5 — Install dependencies

```
pip install -r requirements.txt
```

Step 6 — Run Python server

```
python -m openapi_server
```

Open in browser:

```
http://localhost:8080/api/v1/ui/
```

That is Swagger UI for Python server.

Step 7 — Implement logic (Optional)

Open: openapi_server/controllers/default_controller.py

Replace: return "do some magic!"

With your actual logic (in-memory list or database).

Restart server after changes.

SECTION 3 — Java Spring Boot Server Setup

Step 1 — Generate Java Spring server

```
openapi-generator-cli generate -i api_docs.yaml -g spring -o java_server
```

Step 2 — Install Java JDK

Install JDK 17 or newer from:

<https://adoptium.net/>

Verify installation:

```
java -version
```

Step 3 — Install Maven

1. Download Maven zip from:

<https://maven.apache.org/download.cgi>

2. Extract to:

Example: C:\Program Files\apache-maven-3.9.x

3. Set environment variables:

Create:

MAVEN_HOME = C:\Program Files\apache-maven-3.9.x

Add to PATH:

%MAVEN_HOME%\bin

4. Restart terminal

Verify:

```
mvn -version
```

Step 4 — Run Java Spring server

Go inside folder:

```
cd java_server
```

Run:

```
mvn spring-boot:run
```

Open Swagger UI in browser:

```
http://localhost:8080/swagger-ui.html
```

Step 5 — Implement logic

Open controller files inside:

```
src/main/java/.../controller/
```

Replace:

```
return new ResponseEntity<>(HttpStatus.NOT_IMPLEMENTED);
```

With real logic.

Restart server after changes.

SECTION 4 — Testing API

You can test in three ways:

1. Swagger UI (recommended)
2. Postman
3. Curl

Example curl:

```
curl http://localhost:8080/books
```

SECTION 5 — Common Errors

1. "python3.10 not recognized"

Use:

```
py -3.10
```

2. "mvn not recognized"

You did not add Maven bin folder to PATH.

3. "No plugin found for prefix spring-boot"

Make sure:

- You are inside java_server folder
- There is a pom.xml file in current directory

OPENAPI GENERATOR DOCS: <https://openapi-generator.tech/docs/installation/>