Lab 4: Web API–Part I

Objectives:

- To create specifications of Web APIs and develop them using Swagger and NodeJS.

Description:

In this lab, you will create web API specifications and then code them using Swagger and NodeJS. Web APIs, essentially, are the veins by which modern RESTful web services (RWS) are provided. Representational State Transfer (REST) is a software architectural style that defines a set of constraints to be used for creating Web services. Web services that conform to the REST architectural style, termed as RESTful Web services (RWS), provide interoperability between computer systems on the Internet. RESTful Web services allow the requesting systems to access and manipulate textual representations of Web resources by using a uniform and predefined set of stateless operations.

They are heavily utilised to ensure interactions among different organisations in which different organisations expose their web ends with formal specifications. These formal specifications actually define the stateless operations each end of the organisation supports. This lab will teach you how to create a simple Web API and then code them using two popular technologies: Swagger and NodeJS.

Swagger (swagger.io) is an open-source software framework backed by a large ecosystem of tools that helps developers design, build, document, and consume RESTful Web services. While most users identify Swagger by the Swagger UI tool, the Swagger toolset includes support for automated documentation, code generation, and test-case generation. In this lab, you will utilise the swagger NPM package and the Swagger UI to perform the corresponding tasks.

Complete each checkpoint and show it to your teacher to tick it off.

Task: Creating a simple Web API following a tutorial

In this task, you will follow a simple tutorial from the following location:

- https://scotch.io/tutorials/speed-up-your-restful-api-development-in-node-js-with-swagger

Go through the tutorial and try to understand what is being done.

A few points to remember while going through the tutorial:

- You might see an error like this: "Error: Cannot find module swagger_router". The error occurs because of some version mismatch issues. To fix this error, do the following steps:
    - Copy all files from *movie_collection/node_modules/swagger-node-runner/fittings* to *movie_collection/api/fittings/*
    - Copy all files from *movie_collection/node_modules/bagpipes/lib/fittings* to *movie_collection/api/fittings/*
    - Restart your project. The error should be gone.

- Instead of using this command "swagger movie-collection start -m" use this command **"swagger project start -m"**
- Also, while adding operationId for each route, "**operationId: delMovie"** will be under delete in /movie (just before the ***add a movie section***)

Checkpoint – 1(2 Marks): Follow the given tutorial up to the **Installation and run the example**section. Edit your app so that it shows this text with the response, (assuming the given name was Jenny): *Jenny is having fun learning Swagger with NodeJS and she is pretty excited about it!*