Kyle McSweeney

Global Weather RESTful API

Project Overview

Objective:

The objective of this project is to expose a SOAP web service through a RESTful API developed using RAML and Mule 4.x. This new service will allow legacy web services to be exposed as REST services

Business Case:

This project will help modernise a business's technology platform by developing an API framework that utilises modern architecture to transform legacy web services. This will benefit both the business, and its customer's as a modern REST API will reduce integration timeframes, increase technological performance and improve future integration compatibility.

Assumptions:

The user will have a technological background, with understanding of RESTful APIs and the Mule environment.

Operating Requirements:

The SOAP web service must run locally and accessed through port 8080, as stated in the Mule API specification.

Users of the service will be able to retrieve resources using REST protocols from a designated SOAP web service

Architecture:

The RESTful service is designed in a way that consumes the given SOAP web service, transforms the inputs & outputs into JSON format, and exposes the resources for REST clients to GET.

The service utilises HTTP listeners to listen for HTTP requests by these REST clients, and Uses Web service consumers and Dataweave transform language to consume and transform the SOAP message.

The REST web service obeys the primary principles of REST, that is:

1. Statelessness
2. Client-server modelling
3. Uniform resource identifiers
4. Caching
5. Layered Architecture

Interface Requirements:

- Mule 4.X Anypoint Studio
- Postman or any REST client

Future Considerations

1. Security: Expanding upon the API by adding authentication (potentially in the form of API keys)
2. Pagination: Limiting the number of results returned after a request (default values)
3. Stricter and more detailed error handling