

Project Introduction

The OpenMRS FHIR REST API Documentation will be the easiest way to know about how anyone can export and import data into the OpenMRS in the form of FHIR Resources. So this API documentation should have capability to give more description to the developers and non-technical people about how and when they can use API endpoints in FHIR Module.

Currently, FHIR1 module has Swagger / Open API documentation. This FHIR1 module is deprecated and the FHIR2 module needs the user friendly API Documentation.

Project Mentors

- Christina White
- Jacinta Gichuhi
- The FHIR Squad

Project Goals

1. Add clear description about APIs
 - Find out all the FHIR endpoints
 - Add information about the context of each endpoint
 - Add information about when user needs to use each endpoint
2. Add guidance on how user can use the APIs
 - Giving clear description about following things
 - Request URL
 - Request query parameter
 - Request path parameter
 - Request header
 - Request body
 - Response Messages
 - Error Messages

3. Add easier ways to test APIs
 - Add Curl Requests
 - Add Sample requests

Proposed API Documentation Platform

I am planning to use Slate API Documentation Generator to create FHIR API Documentation. Because Slate API Documentation Generator is

- under apache-2.0 license and can be used for open-source projects.
- used by renowned companies such as Nasa, Sony.
- used to create OpenMRS REST API Documentation.

Structure of the API Documentation

Introduction

Brief introduction about what is FHIR Module in OpenMRS and what needs it serves.

Base URL Pattern for each OpenMRS Distribution

Add what should be the Base URL according to the OpenMRS Distribution.

Ex - In Standalone Application - <hostname>:<port>/openmrs-standalone/ws/fhir2/
In Reference application - <hostname>:<port>/openmrs/ws/fhir2/R4/

Resources, Sub Resources

Brief introduction about resources, sub resources

Supposed to add the following resources details to this API Documentation.

- Practitioner
- Location
- Encounter
- Observation
- AllergyIntolerance
- Condition
- Medication
- Task

In the initial stage of this project, I would like to discuss my project proposal with The FHIR Squad and finalize what resources should be added to the API Documentation.

Response Format

Mention that all objects support json and xml formats and how user can retrieve objects in desired format.

Authentication

Add details about how to do authentication to access OpenMRS FHIR APIs.

FHIR supported Resources

For each FHIR supported resources, Information will be added to the API Documentation in the following format.

API Description

Name of the Resource

Brief discription about the context of the API endpoint

Wiki page URL to the specific resource

Request Base URL format

Request query parameters

Parameter Name, Parameter Data Type, Parameter Description

Request header

Header Name, Header Value

How to Use API

Operation for Resource type

Brief discription about when user needs to use the API endpoint

Request URL

Response body

Sample Response body

Test API

Add cURL Command to test the API

Error Messages

Add Error message details which may be given in OperationOutcome resource format. Error Messages details will be added in the following format.

resourceType

severity

code

Diagnostics

Project Plan

1. **Community Bonding** - 2020 August 17 - 2020 September 13 (3 Weeks)
 - Review the project proposal with mentors
 - Add mentors suggestion to the project scope
 - Finalize project scope

2. **Doc Development** - 2020 September 14 - 2020 November 30 (11 Weeks)
 - 2.1. Setup API documentation Platform. (Slate) - 1 week
 - 2.2. Create and finalize API Information - 7 weeks
 - Create and finalize API documentation introduction, resource and sub resource content.
 - Create a complete content for one FHIR supported Resource in the mentioned format under FHIR supported Resources topic. (Ex - Patient Resource) - 1 week
 - Review the content with the mentors and used it as template to draft other API information.
 - Draft the finalized content in the API documentation Platform
 - Create and finalize content for all other FHIR resource types and draft them on API documentation Platform
 - 2.3. Add error message details - 1 week
 - 2.4. Complete the API Documentation - 2weeks
 - Complete the API documentation and review it with mentors -
 - Finalize the FHIR API Documentation -

3. **Submit the Project Evaluation** - 2020 December 5

Previous Open Source Contributions

Successfully completed Google Summer of Code 2017 project in Sustainable Computing Research Group (<https://summerofcode.withgoogle.com/projects/4885623415504896>)

Create All Installation Guide page

(<https://wiki.openmrs.org/display/docs/All+Installation+Guides>) on OpenMRS Wiki Space

according to the trello Task -

<https://trello.com/c/qPd7caZH/23-try-out-the-different-openmrs-installation-links>

Try out the different OpenMRS distribution installation steps and do necessary changes on OpenMRS Wiki Space (<https://wiki.openmrs.org/display/docs/OpenMRS+Standalone>)