 Summary of testing

Product:

Ataccama TestCalc is an application allowing user to perform arithmetical operations on two arguments in the enormous range of Java int. GET and POST method requests are accepted by REST Web Service.

Main Features

* Java int numerical range
* Up to two operands
* Supported operations: addition, subtraction, multiplication, division.

Testing approach:

Test objectives:

* Verify the fulfilment of specified requirements
* Validate if the application is complete and works as expected
* Find defects in the application
* Provide sufficient information about level of quality of the application
* Prevent regression defects in the application between releases

Scope:

* **Documentation testing:**  
  Inspecting the spec and making sure that endpoints are correctly named,   
  resources and their types correctly reflect the object model, that there is no missed functionality and relationships between resources are reflected in API correctly
* **Functional testing:**1. Checking main functionality with valid input values using Equivalence Partitioning technique  
  2. Checking boundary values of input and output fields  
  3. Testing the application with invalid input data (empty or missing fields, incorrect value type e.t.c)  
  4. Destructive testing (attempt to fail the API: using incorrect headers, using unsupported HTTP methods e.t.c)

Out of scope:

* **Security and Authorisation testing (application does not require authorisation)**
* **Load Testing, Stress Testing**
* **Integration testing**

Tools:

Based on the requirements and set of tests that need to be implemented, the following set of tools is well suited for writing powerful and maintainable tests of REST API services

* Java+Maven
* JUnit5
* Rest Assured
* Allure reports