# Overview

This document provides an API specification for consuming from client end. The application provides an API to perform arithmetic operations and generate reports of the API.

# Calculator API

The calculator app exposes two API’s to perform basic and advanced operations. Advanced operations can be performed only by authorized users.

## URL

* /calculator/standard/
* /calculator/scientific/

## Method:

* GET
* POST

## URL Parameters

The calculator resource can be accessed by parameters.

**Required**

Op =[string]

a=[number]

b=[number] \*\* optional for factorial and sqrt functions

The supported operators for basic:

* add,mul,div,sub

Operators for scientific are

* pow,sqrt,fact

The user need to pass any one of the operator from above mentioned values along with operands using following methods

* The GET /?op=...&a=...&b=... method uses the query parameters to specify the input.
* The POST / method uses a JSON payload of {"op":"string","a":"Number", b":"Number", "op":"string"} to Specify the input.

## Success Response

* 200 value

## Error Response

* 400 Validation errors
* 401 Authentication failure
* 500 Internal errors

## Sample call

**$***.ajax({* **url***: "/calculator/standard/?op=add&a=100&b=300",* **dataType***: "json",* **type** *: "GET",  
 success : function(r) {* ***console****.log(r); }});*

# API Reports

This app provides an API metric like Request count, median\_latency, error count and API name. The report can be generated for daily, monthly and weekly basis.

This API can be accessed anyone since to know usage of basic arithmetic operations API which is public.

It can also the metrics based on the users if the user is logged in.

## URL

/api/dashboard/?filter=<value>

## Method

* GET

## Required Parameter

‘filter= [number]’

## Success Response

200 : {

"api\_name": "StandardCalculator",

"request\_count": 1,

"median\_latency": 0.009,

"error\_count": 1

}

## Sample call

**$***.ajax({* **url***: "/api/dashboard/?filter=1",* **dataType***: "json",* **type** *: "GET",  
 success : function(r) {* ***console****.log(r); }});*