

# CSC413 Assignment 1: Simple Rest API

**Due:** September 20th, 7:10pm

## Task:

Create a simple REST API Backend that parses the requested resource, and routes it to the appropriate method, and returns a response. Your responses will be in the JSON data format. Requests will use the GET Http method, and respond with “application/json” in the header. Use the Google GSON library to interact with JSON

## Architecture:

Use the **Singleton** pattern to encapsulate the server object. Place all the running logic in a method named run. Use the **Builder** pattern to generate your responses. Avoid iterating through lists for the filters, instead create maps on load.

## Endpoints:

- User
  - Behavior:
    - Returns all users
- posts
  - Behavior:
    - Returns all posts
- Posts
  - Params
    - userid
  - Behavior:
    - Returns all posts by a user
- posts
  - Params:
    - Userid
  - Behavior:
    - Returns all posts by a user
- comments
  - Params:
    - Postid
  - Behavior:
    - Returns all comments on a specific post

**Parameters:**

Parameters follow the endpoint after the question mark. Arguments are split up by the & sign.

`/<endpoint>?param1=something&param2=something`

**Responses:**

Create a response class that contains the fields **status**, **timestamp**, **entries**, and **data**. Status should show either OK, or a descriptive error. Timestamp is the time the response was generated. Data is an array of objects. Entries is the count of entries. A response should look something like this:

```
{
  "status": "OK",
  "timestamp": "<Current time here>",
  "entries": 2,
  "data": [
    {
      "postid": 0,
      "userid": 1,
      "data": "I lost my lightsaber, anyone seen it?"
    },
    {
      "postid": 1,
      "userid": 0,
      "data": "Found lightsaber, looking for owner"
    }
  ]
}
```

**Bitbucket:**

Use master and develop branches. Working commits go to develop, only pull request to master when finished. Don't need to do feature branches yet.

**Grading:**

- 60% For Working Program (Demo)
- 30% Style
- 10% Docs (Turn in zip)