

# BE - NY Capital Projects

On Mosaic app we rely on asynchronous function calls in building a responsive UI. In this take home assignment, we would like you to build a back end API service that can be scaled out. You are given a JSON dataset that you can store in memory and run the APIs against it.

<https://www.dropbox.com/s/f6felqxxxol0ngo/Al%20Dataset.json?dl=0>

## Goals

- Store data in a database (SQLite, Postgres, MongoDB, etc)
- A **search API** that searches in "Project School Name" and "Project Description" and returns matching results in an JSON array.
- Search API supports filters on [Project Phase Actual Start Date, Project Phase Planned End Date, Project Phase Actual End Date, Project Budget Amount, Final Estimate of Actual Costs Through End of Phase Amount, Total Phase Actual Spending Amount]
- Search API supports results pagination
- **Update** API on individual projects to update [Project Phase Actual Start Date, Total Phase Actual Spending Amount]
- Have clean code structure and a well thought architecture
- **Describe** your plan for scaling this service to support thousands of active users
- **Unit Tests**
- Accepted Programming Languages: Ruby, TypeScript
- **Bonus #1:** Using Redis store data

## Out of scope

- NLP and search algorithms
- Using Dockers or Elasticsearch
- Any feature that is not mentioned in the goals

## Deliverable

A GitHub repository link