

Covid-19 Tracker for Sri Lanka

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Technology Selection

The technologies which were selected are as follows:

- Spring Boot 2 - Spring Boot 2 is a Java and Spring based application which helps to build a service aiding rapid development and hence faster delivery cycle. This application uses spring web and spring cloud dependencies also we could use other features of spring boot if the need arises.
- Angular - The front end was built using Angular which helps in build more robust front-end by employing the concepts such as modules, routing and components which are the basic building blocks. Moreover, we would expand the application in a more structure way by using the above concepts.
- Bootstrap - Bootstrap was used to support responsive design by using readily available classes and the grid system.
- Local storage - Local storage was used to store the data provided by the API, since the data does not contain sensitive information. Local storage's storage capacity would depend from browser to browser, however, it fits well for our requirement which has much more simpler data.

Infrastructure Selection

- Nginx - Nginx was used to serve as the web server and which proxies the incoming request to the respective services. Nginx is light-weight and powerful tool which can be setup with less effort.
- Docker - Docker was used containerize the application - Covid-19-tracker-api-java, covid-19-ui and nginx docker image. We can readily make use of the applications by leveraging the benefits of Docker which is shipping the needed base image, the dependencies and other operations.
- Kubernetes (K8s) - Kubernetes was used as the place where we deploy and orchestrate our applications. K8s is an open-source tool which is available to be used, however, having the initial setup over-head on the other hand the benefits K8s brings about outweigh the initial setup, such as YAML based configurations, security, scaling and etc. We can also opt out for available platforms such as Google Kubernetes Engine or AWS depending on our requirement and budget.