**Architecture :**

In order to make command line application to a highly scalable, reliable and available secured web application I would prefer to present the below mentioned architecture.

**Scalability :**

Since this web application expected to get millions of concurrent hits on the same time,

A good architecture is to make the application available without interruption under high traffic

this can be achieved by making system scalable with combination of dedicated and on demand resources with automated deployments.

**Reliability :**

To make this application reliable we can host the application in different data centers at different locations to as plan disaster recovery.

**Availability :**

To make this application available we can distribute the traffic to all web servers using Load balancers. With this we can achieve failover capabilities.

**Security :**

To keep the system secured we can use the identity access management , VPN's along with access control rules.

**Caching :** We can make use of the browser cache or dedicated systems like Redis to make the requests accessible faster

**Application Design :**

To make web application well designed I would like to use the below mentioned functionalities :

* Make the application responsive so it can be seamlessly fit to screen size using modern scripting technologies like reactjs, nodejs or angular js.
* Since the data doesn’t changes frequently, I would like make API call and keep the results in Redis DB on first request of the every day .
* Sort the results by Applicant Name , Start time and closing Time.
* If we have access to user location we can sort the results based on location using the longitude and latitude.
* Using user location and longitude latitude of the food truck we can display truck locations on map.
* For every result we can provide external link for direction to truck from user location using maps

ex.: <https://www.google.com/maps/search/?api=1&query=37.789121900046254,-122.40207154934198>

* We can use search by functionality to search food trucks base on the applicant name , time and address.
* Using the search we can show all nearby open food trucks based on the user address provided.
* We can introduce the filter based on distance range from user location and menu (optionalText from API).
* We can make the results configurable like number results per page, number of attributes or columns in a page.
* Use pagination to display the results in multiple pages.
* Since the day and time mentioned in the result we can provide option to select day and check the results.
* Design the system keeping future enhancement in considerations.

**Enhancements :** In near future if API supports we can include below mentioned functionalities

* Appointments for food trucks.
* Online Order and home Delivery.
* Dynamic Menu Display.
* Ratings and Reviews for the food truck.
* Notifications about favorite food truck and menu to subscribed users.