Codechef Contest Arena

How to Start this Application?

1. Go to url http://mycodechef.s3-website.ap-south-1.amazonaws.com
2. Sign in with Codechef credentials.
3. You will be redirected to the homepage where you will have access to different contests.

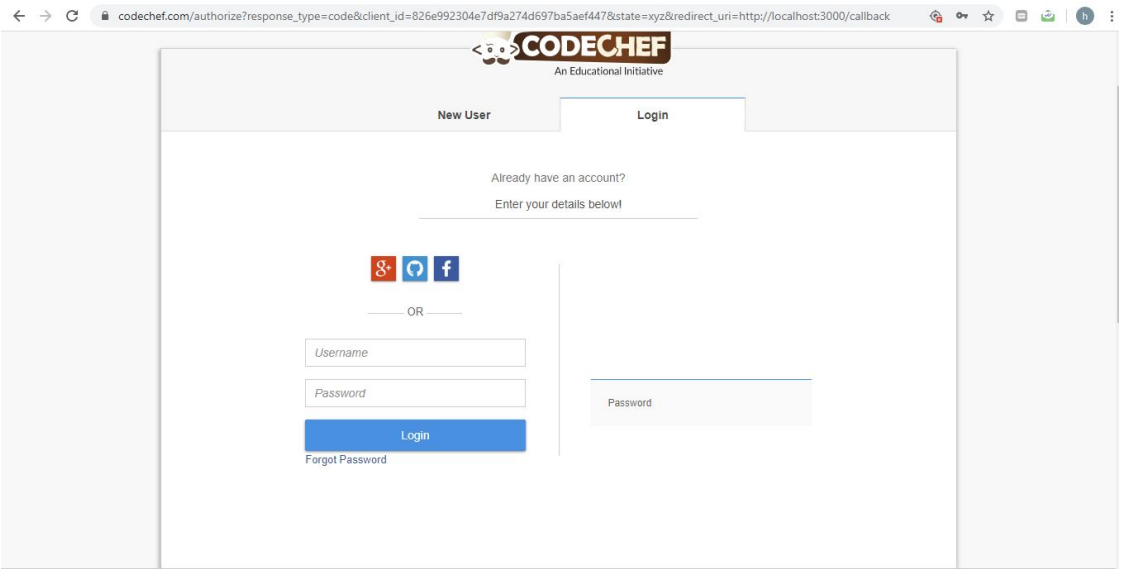
Tech Stack

1. Javascript: Primary programming language
2. CSS: Styling web pages, HTML files
3. ReactJS: Javascript library for building User Interfaces
4. External AP

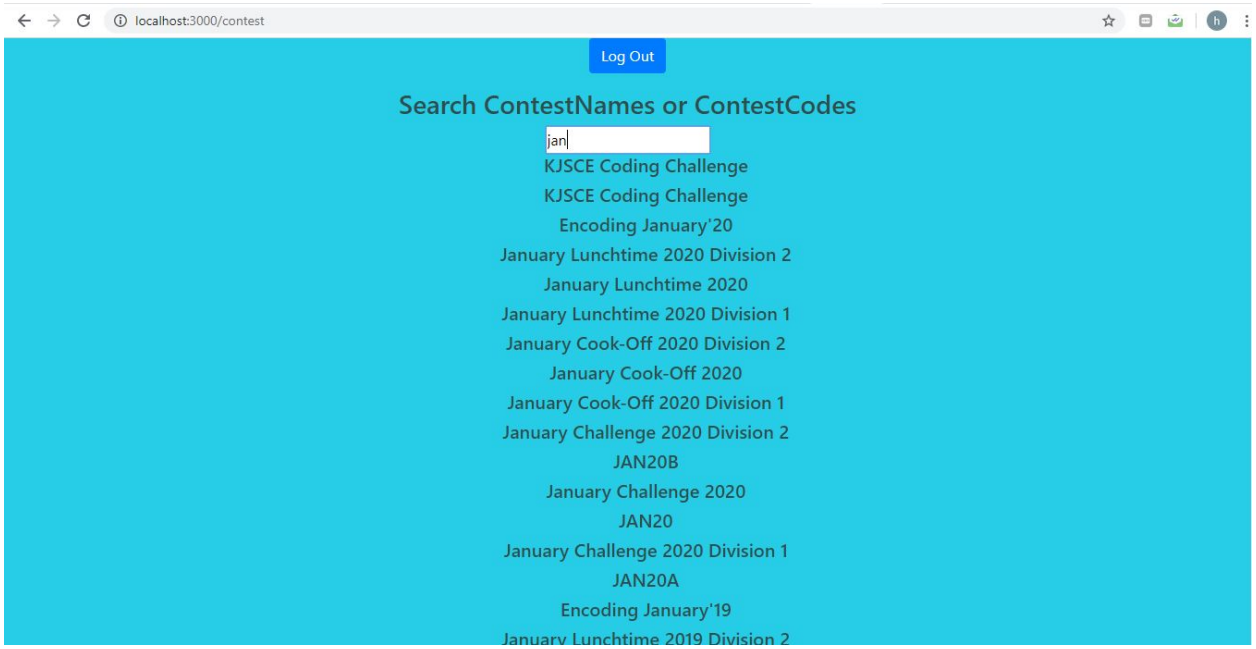
Approach

OAUTH 2.0

Codechef Contest Arena is a webpage which can be used by any authorized user to participate in various contests that are conducted by Codechef. When the application loads up,the user is asked to authorize .Then a POST request is sent to the API *api.codechef.com/oauth/token* with authorization code and then AccessToken,RefreshToken are fetched which are then saved in localstorage of the browser.



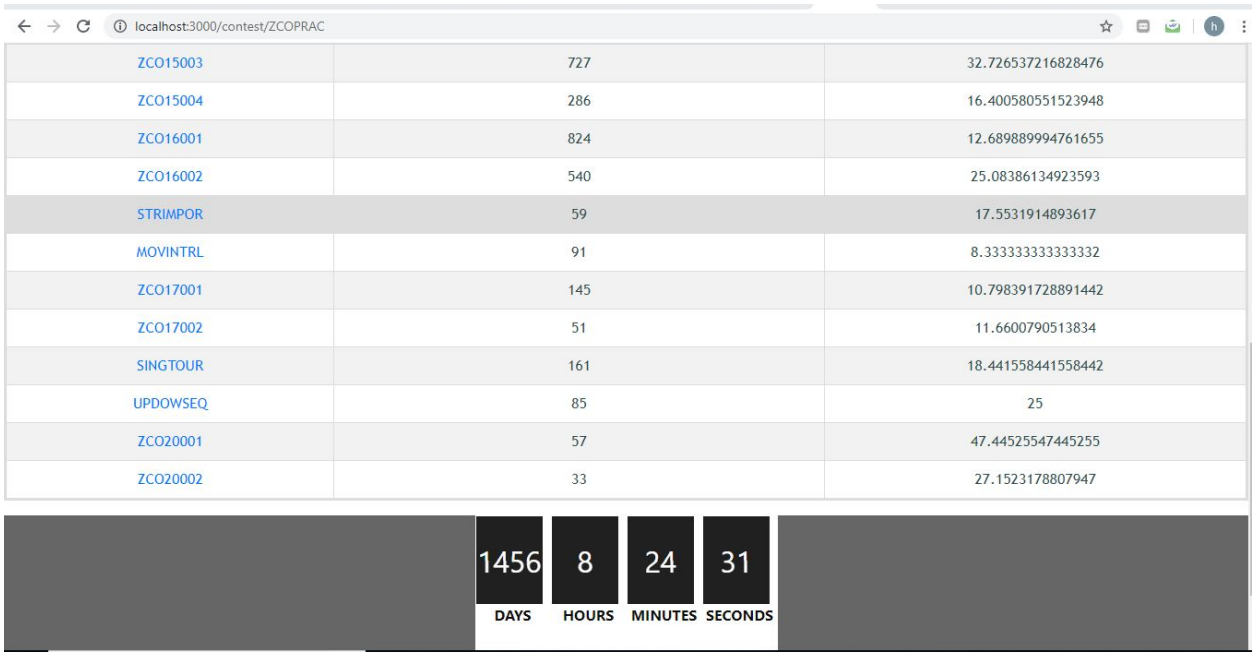
After this an AutoComplete Box is displayed which contains Contest Names and ContestCodes.When one of them is selected , a GET request is sent to the API *api.codechef.com/contests/{contestCode}* and details of that contest are fetched.A clickable list of problems ,timer of the contest and Ranklist of the contest are shown.



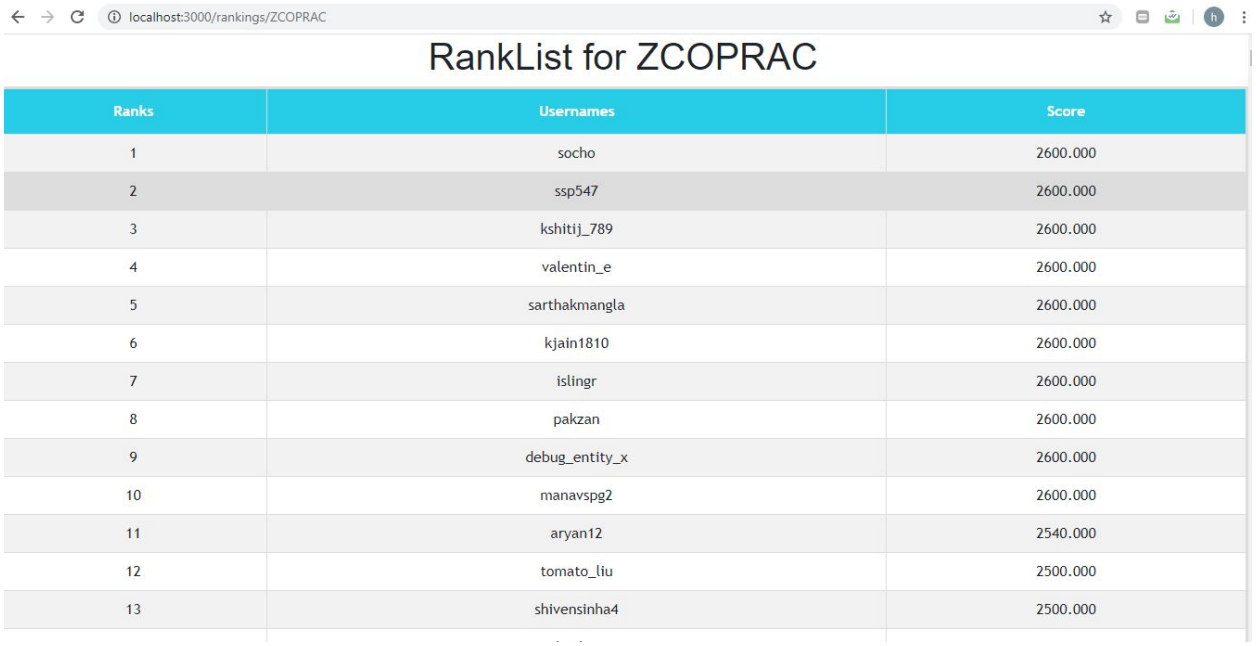
If the Contest is ended already-

If the contest is not started yet,

If the contest is running



Further when a user selects any problem by clicking on the link a GET request is sent to the API *api.codechef.com/contests/{contestCode}/problems/{problemCode}*and complete details of the problem are fetched.And if user clicks on Go to Contest ranks then another GET request is sent to the API *api.codechef.com/rankings/{contestCode}*which will give the rank list of the users with scores.



localhost:3000/rankings/ZCOPRAC

RankList for ZCOPRAC

Ranks	Usernames	Score
1	socho	2600.000
2	ssp547	2600.000
3	kshitij_789	2600.000
4	valentin_e	2600.000
5	sarthakmangla	2600.000
6	kjain1810	2600.000
7	islingr	2600.000
8	pakzan	2600.000
9	debug_entity_x	2600.000
10	manavspg2	2600.000
11	aryan12	2540.000
12	tomato_liu	2500.000
13	shivensinha4	2500.000

localhost:3000/contest/JAN17/problems/CAPIMOVE

Capital Movement

All Submissions

Read problems statements in Mandarin Chinese, Russian and Vietnamese as well.

Chef is playing a video game. In a video game, there's a advanced civilization that has a total of **N** planets under control. All of those planets are connected with **N-1** teleports in such a way, that it's possible to travel between any two planets using those teleports.

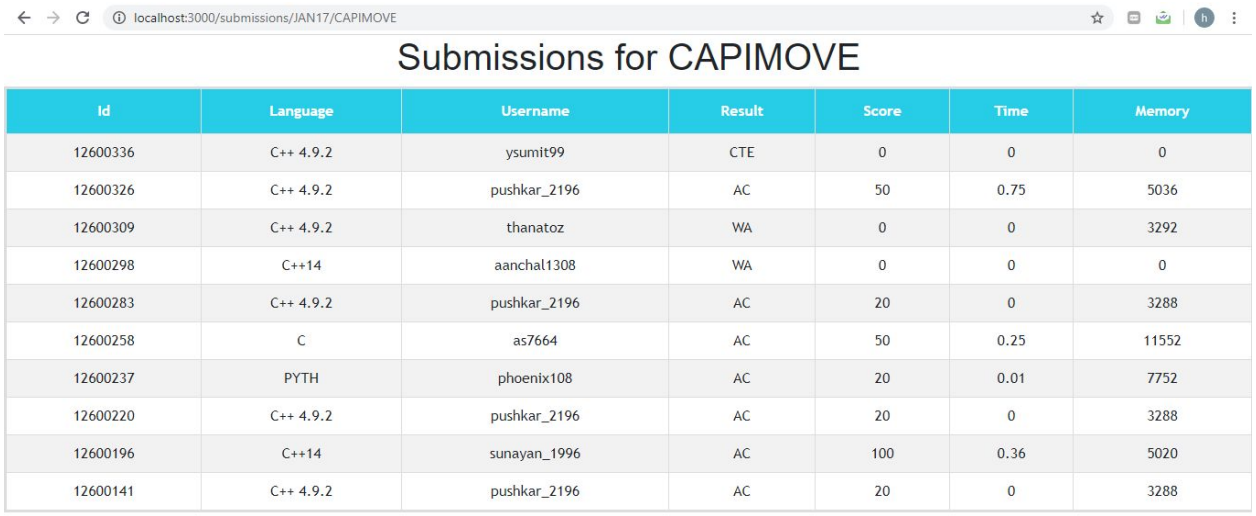
There's a chance that some planet gets infected. In this case it takes 24 hours for civilization to find out infection and prevent it from spreading. During this time infection uses teleport one time and infect all the planets that can be achieved in one teleport jump. So, once infection is detected at planet **V**, scientists already know that all planets connected to **V** via teleport are also infected. All the neccessary teleports are disabled right away and medics start working on eliminating the infection.

Each planet has population. Planets are numbered from **1** to **N** and their populations are P_1, P_2, ..., P_N. It is known that all the P_i are distinct.

There's a capital among all those planets. The capital is known to have the biggest population.

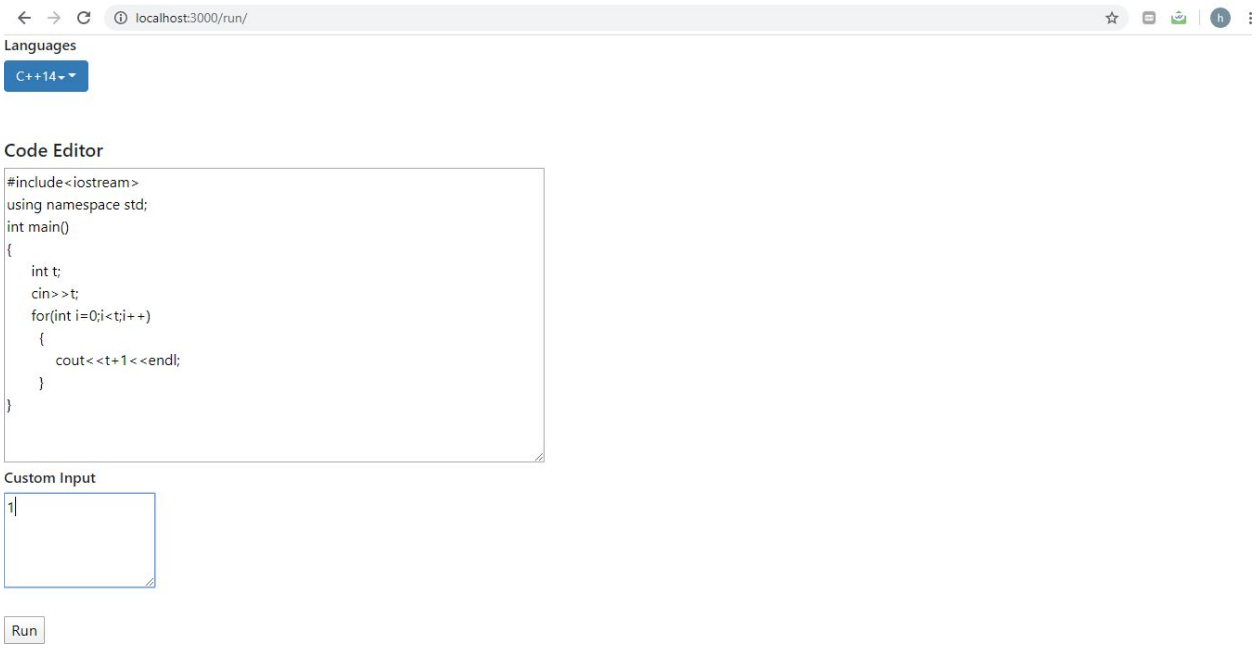
Once infection is detected at planet **V**, after disabling teleports on planet **V** and all connected to them, government has to establish a new

Further users can view submissions for the problem by clicking on the All Submissions button .A GET request will be sent to the API *api.codechef.com/submissions/?problemCode={problemCode}&contestCode={contestCode}* and a list of users with all information about submissions will be fetched.

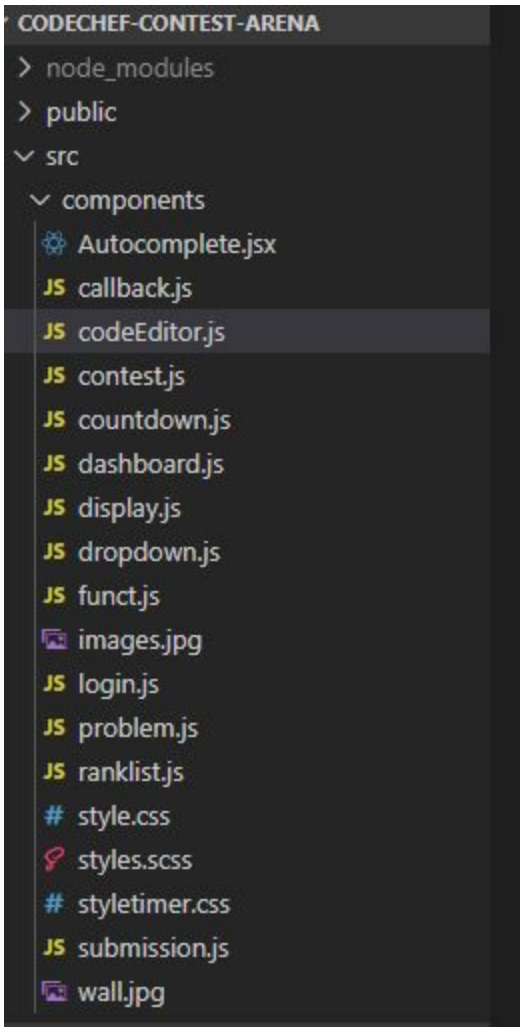


Id	Language	Username	Result	Score	Time	Memory
12600336	C++ 4.9.2	ysumit99	CTE	0	0	0
12600326	C++ 4.9.2	pushkar_2196	AC	50	0.75	5036
12600309	C++ 4.9.2	thanatoz	WA	0	0	3292
12600298	C++14	aanchal1308	WA	0	0	0
12600283	C++ 4.9.2	pushkar_2196	AC	20	0	3288
12600258	C	as7664	AC	50	0.25	11552
12600237	PYTH	phoenix108	AC	20	0.01	7752
12600220	C++ 4.9.2	pushkar_2196	AC	20	0	3288
12600196	C++14	sunayan_1996	AC	100	0.36	5020
12600141	C++ 4.9.2	pushkar_2196	AC	20	0	3288

And By clicking on the Submit button, the Code editor will be opened where users can check their codes.
For that first there will be a GET request which will fetch the list of languages that can be selected by the user.
After that a POST request `https://api.codechef.com/ide/run`
Which will return a link which is required for the next fetch call.
And then GET request to `"https://api.codechef.com/ide/status?link=`
With the link which we got from the previous call.



FOLDER STRUCTURE



NPM packages used

- react-html-parser
- query-string
- Browser Router,Link,Route
- PropTypes
- react-dom

I really enjoyed working on this web app. Through this project I have learnt a lot as it was my first web application.

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