Implementation of Covid Tracker website using react js

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Abstract – *Analyzing the data of a deadly pandemic that has created a mess in this wonderful world and caused a lot of deaths is a need of this hour such that we can easily take preventive measures and hold this pandemic growth and eradicate it with certain measures and proper planning and a study is needed to analyze whether any inter-mediate hosts have facilitated the transmission of the virus to humans or vice versa and this could only be done if precise data is analyzed. The paper revolves around a project created with a bunch of features of React JS from exciting frontend components with Material UI to writing CSS, JSX and making API calls to collect worldwide data related to Corona virus. The major highlights of the project entitled in this paper are no page reloads, Responsiveness, body-parsing, API calls for data collection, JSX (HTML inside JS), sorting algorithms, dynamic data representation, REDUX, data representation in dynamic graphs/pie charts. The web software entitled in this paper is a complete package of features of React JS integrated with some other frontend technologies like CSS and material UI going through which any user can analyzes the data related to corona virus geographically as well as graphically.*

Keywords- *Dynamic data representation, Responsiveness, API calls, JSX, Sorting algorithms, NPM packages, Page reloads, JSON, Library , components.*

I - INTRODUCTION

The first conformed cases of SARS-CoV-2 in Spain were identified in late February 2020. Since then , Spain became , by the end of march, the third most affected country worldwide after the United States and Italy and recorded the second number of deaths due to the SARS-Co V-2 pandemic after Italy. Since March 16th , lockdown measures oriented on flattening the epidemic curve were in place in Spain, restricting social contact, reducing public transport, and closing businesses, except for those essential to the country's supply chains. However, this has not been enough to change the rising trend of the epidemic. For this reason, a more restrictive lockdown was suggested, and eventually undertaken by the Spanish Government on March 30th. Data visualization is an important tool for exploring and communicating findings in medical research, and specially in epidemiological surveillance. It can help researchers and policy makers to identify and understand trends that could be overlooked if the data were reviewed in tabular form.

 "COVID19 TRACKER" is a useful application with a bunch of exciting features that it offers to the users from no page reloads to all corona virus related data under a single web page. It covers all scenarios to achieve the requirements of any user searching for worldwide or country wise details regarding corona virus. This application is developed for serving its users to the fullest of it's potential by providing them a platform where they can get the data and information about corona virus not only worldwide but also country wise and in graphical as well as geographical display. Though the application is based more on the frontend development but dynamic data is also given equal preference. The data is collected by asynchronous API

calls to disease.sh that provides dynamic data depending on the endpoint used during the call. In simple words disease.sh acts as a server to which we make GET request to provided endpoint and according to endpoint it gives JSON data in response.

II-LITERATURE SURVEY

Sr. No.	Title	Author	Year
1	"Method during the COVID-19 Pandademi"	Triantafyllid isl	2019
2	"the unprecedented outbreak of the 2019 novel coronavirus, termed as COVID-19 Wold Health Organization"	KouroubaliA ,Koumakis	2020
3	"An integrated approach towards developing quality mobile health app"	Kondylakis H, Katehakis DG	2020

III-PROBLEM STATEMENT

During the daytime, all age groups should minimize the amount of time spent sitting (being sedentary). There is good evidence that if you are currently not active at all, taking a brisk walk for 10 minutes a day brings health benefits. However the more you do, the greater the benefits. In the following recommendations: Moderate-intensity activity means an activity that makes you breathe a bit faster, feel a bit warmer and notice your heart beating faster - for example, walking briskly. Vigorous-intensity activity will usually make you breathe very hard, so you feel short of breath, make your heart beat quickly and mean you will be unable to carry on a conversation - for example, running or cycling.

IV - METHODOLOGY

During the development phase of this software certain steps were followed to represent the corona virus related data in the best way possible. Such that precise data is served to a user in different formats including graphical and geographical representation. Steps followed while development of this project is as follows:

1. Basic structure of the application was created before implementation of any code. The structure was designed in such a way the whole UI looks as a single web page and there are no too many instructions for the user to reach to a particular data.

2. Coding phase of the website was initiated and was planned in such a way that when a particular variable changes the component in the DOM associated to it is automatically changed.

3. The coding was performed in a hierarchical manner such that parent component was implanted first after that implementation of child components was performed. For Example: Parent Component: App Child Component: MAP, Search

4. As the app was coded in components thus making code reusable.

5. API call were made to disease.sh in order to get data. GET requests were made to endpoints provided by disease.sh.

6. .All data fetching calls were made under useEffect() hook provided by React JS that takes two parameters one as an async function describing what to do and second argument as when to run that function

7. After collection of the data the data was transformed in the required formats as required format for graphs is X, Y coordinates.

8. CSS and Material UI are also used as a helping hand to make this website much more attractive.

9. Two modes of web view are also provided for convenience of the user dark mode and light mode

10.Applications: Set up the development environment, install all t you search.

V-I FLOW CHART
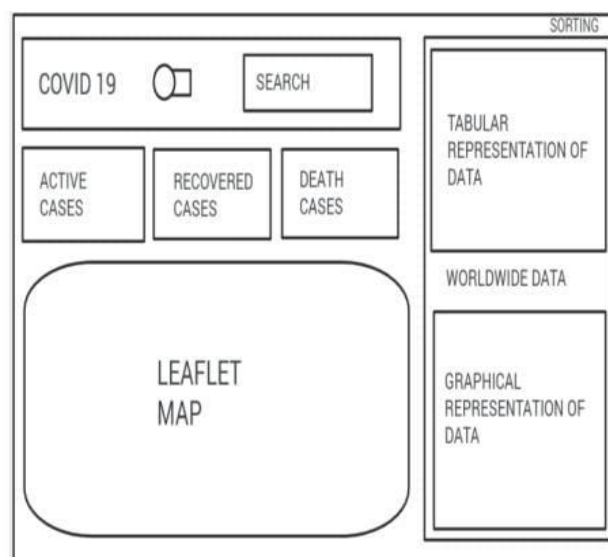
VI-RESULT AND ANAIYSIS

The resulting web application produced serves as a best example for software created taken in care of all React JS features and gives user best of UI to use [5]. The representation of data is correctly performed and well managed and colour combinations used in project are well managed in both the modes dark and light. This will let a user coming from any part of the world to either have a look at worldwide data or search according to different countries of choice and not only the data but different forms of data. All these things make this web application easy to use and contribute in providing it responsive and an attractive UI[1]
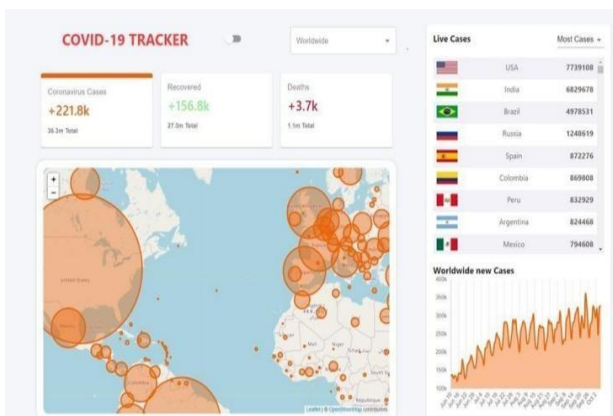

Fig. 1

Fig. 2

As it is very clear from Figure 1 and 2 that whole project is created in components and each component is designed in such a way that a very lessuser interaction is required but the data represented is more. There is no need for user to search for data from different sources it is just available easily with very less interaction and that too under a single webA descriptive analysis of the effect of the COVID-19 pandemic on driving behavior and road safety.

Highlights:

1. The effect on driving behavior and road safety due to COVID-19 is assessed
2. Data prior and during the first two months of the pandemic are analyzed.
3. COVID-19 led to an increase in speeds, harsh events and use of mobile phone.
4. Policymakers should establish new speed limits and wider spaces for all users.

With the majority of the global population on a ―lockdown status, road traffic volumes and mobility activities in general have immensely dropped (Clarke, 2020; Google LLC, 2020). The reduction of traffic volumes moving on road infrastructure, evidently reduces their exposure to another important health problem, namely road traffic accidents. Traffic collisions kill approximately 1.35 million people and injure up to another 50 million people each year (WHO, 2018), rates that are comparable to the currentCOVID-19 in perspective. However, to-date the effect of COVID-19 induced lockdown on driving behaviour has not been evaluated.

VII-CONCLUSION

The conclusion of this dissertation and the future work that can be carried out on the basis of the present work. The conclusion summarizes the overall work that has been carried out in this dissertation. The future scope provides the direction for extension of the presented work. The features of the above website are easy to use, attractive UI, charts speaks more than text, real-time data, and last but not least, it is a responsive website for both desktop & mobile view. Covid-19 API is Serving data from John Hopkins University CSSE as a JSON API. You can clone the repo from this link. Finally I would like tothank JavaScript Mastery for the YouTube Video.

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