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| MINOR PROJECT SYNOPSIS | 2020-2021 | |
| MINOR PROJECT RECORD ON COVID 19 UPDATES SYSTEM NAMED COROUP. | | COROUP |

SYNOPSIS

MINOR PROJECT REPORT

ON

COVID 19 UPDATES SYSTEM

“COROUP”

**SUBMITTED IN THE PARTIAL FULLFILLMENT OF REQUIREMENTS OF THE REWARD OF DEGREE OF BACHELOR OF ENGINEERING IN THE BRANCH COMPUTER SCIENCE AND ENGINEERING**



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**“DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING”**

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INTRODUCTION

This minor project is very simple web-application based on some of the very basic technologies.

This project consist of two web-applications viz. one to show the graphical representation of data of the no of corona patients who found to be positive, recovered and who ceased to survive all over the world.

Second is any health organization such as hospitals, quarantine centers etc. can use this software to maintain the records of daily records of patients.

More over an API of vaccination data is also included which will tell about the vaccination data of the country.

TECHNOLOGY USED:

* HTML
* CSS
* JAWASCRIPT
* REACT JS
* MODULES OF REACT JS
* FIREBASE FOR BACKEND
* NETLIFY FOR HOASTING

**AIM OF THE PROJECT:**

**TECHNOLOGIES USED (FRONT END):**

1. **HTML:**

HTML is an acronym which stands for “**Hyper Text Markup Language”** which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.

**Hyper Text:** Hyper Text simply means "Text within Text." A text has a link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. Hyper Text is a way to link two or more web pages (HTML documents) with each other.

**Markup language:** A markup language is a computer language that is used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

**Web Page:** A web page is a document which is commonly written in HTML and translated by a web browser. A web page can be identified by entering an URL. A Web page can be of the static or dynamic type. **With the help of HTML only, we can create static web pages**.

Hence, HTML is a markup language which is used for creating attractive web pages with the help of styling, and which looks in a nice format on a web browser. An HTML document is made of many HTML tags and each HTML tag contains different content.

1. **CSS:**

**C**ascading **S**tyle **S**heets, fondly referred to as **CSS** is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page.  
CSS is easy to learn and understood, but it provides powerful control over the presentation of an HTML document.

WHY CSS?

* CSS saves time: You can write CSS once and reuse the same sheet in multiple HTML pages.
* Easy Maintainence: To make a global change simply change the style, and all elements in all the webpages will be updated automatically.
* Search Engines: CSS is considered a clean coding technique, which means search engines won’t have to struggle to “read” its content.
* Superior styles to HTML: CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.
* Offline Browsing: CSS can store web applications locally with the help of an offline cache. Using this we can view offline websites.

CSS Syntax:  
A CSS comprises style rules that are interpreted by the browser and then applied to the corresponding elements in your document.  
A style rule set consists of a selector and declaration block.

Selector -- h1

Declaration -- {color:blue;font size:12px;}

* The selector points to the HTML element you want to style.
* The declaration block contains one or more declarations separated by semicolons.
* Each declaration includes a CSS property name and a value, separated by a colon.  
  For Example:  
   color is property and blue is value.  
   font size is property and 12px is value.
* A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

1. **JAWASCRIPT:**

### What is JavaScript?

JavaScript is a very powerful **client-side scripting language**. JavaScript is used mainly for enhancing the interaction of a user with the webpage. In other words, you can make your webpage more lively and interactive, with the help of JavaScript. JavaScript is also being used widely in game development and mobile application development.

The language was initially called Live Script and was later renamed JavaScript. There are many programmers who think that JavaScript and java are the same. In fact, JavaScriptand Java are very much unrelated. Java is a very complex programming language whereas JavaScript is only a scripting language. The syntax of JavaScript is mostly influenced by the programming language C.

**How to Run JavaScript?**

Being a scripting language, JavaScript cannot run on its own. In fact, the browser is responsible for running JavaScript code. When a user requests an HTML page with JavaScript in it, the script is sent to the browser and it is up to the browser to execute it. The main advantage of JavaScript is that all modern web browsers support JavaScript. So, you do not have to worry about whether your site visitor uses Internet Explorer, Google Chrome, Firefox or any other browser. JavaScript will be supported. Also, JavaScript runs on any operating system including Windows, Linux or Mac. Thus, JavaScript overcomes the main disadvantages of VBscript (Now deprecated) which is limited to just IE and Windows.

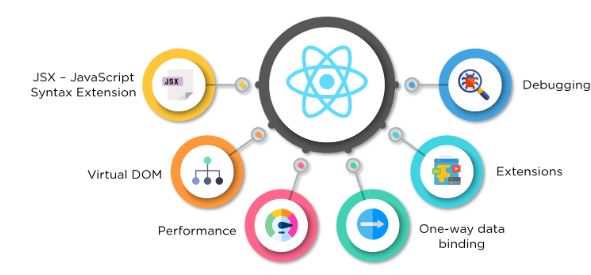
**Tools You Need**

To start with, you need a text editor to write your code and a browser to display the web pages you develop. You can use a text editor of your choice including Notepad++, Visual Studio Code, Sublime Text, Atom or any other text editor you are comfortable with. You can use any web browser including Google Chrome, Firefox, Microsoft Edge, Internet Explorer etc.

1. **REACT JS:**

## What is React?

React is a JavaScript library created for building fast and interactive user interfaces for web and mobile applications. It is an open-source, component-based, front-end library responsible only for the application’s view layer. In Model View Controller (MVC) architecture, the view layer is responsible for how the app looks and feels. React was created by Jordan Walke, a Software engineering at Facebook.



Why React?

* Easy creation of dynamic applications: React makes it easier to create dynamic web applications because it requires less coding and offers more functionality, as opposed to JavaScript, where coding often gets complex very quickly.
* Improved performance: React uses Virtual DOM, thereby creating web applications faster. Virtual DOM compares the components’ previous states and updates only the items in the Real DOM that were changed, instead of updating all of the components again, as conventional web applications do.
* Reusable components: Components are the building blocks of any React application, and a single app usually consists of multiple components. These components have their logic and controls, and they can be reused throughout the application, which in turn dramatically reduces the application’s development time.
* Unidirectional data flow: React follows a unidirectional data flow. This means that when designing a React app, developers often nest child components within parent components. Since the data flows in a single direction, it becomes easier to debug errors and know where a problem occurs in an application at the moment in question.
* Small learning curve: React is easy to learn, as it mostly combines basic HTML and JavaScript concepts with some beneficial additions. Still, as is the case with other tools and frameworks, you have to spend some time to get a proper understanding of React’s library.
* It can be used for the development of both web and mobile apps: We already know that React is used for the development of web applications, but that’s not all it can do. There is a framework called React Native, derived from React itself that is hugely popular and is used for creating beautiful mobile applications. So, in reality, React can be used for making both web and mobile applications.

## TECHNOLOGIES USED(BACK END)

## FIRE BASE:

## We have used the backend technology firebase in our project. Firebase is a mobile- and web application development platform, backed by Google, to help developers deliver richer app experiences. Firebase manages its own infrastructure with a nice set of tools to simplify the workflow of the developer by providing them with development kits and an online dashboard. These toolkits are interconnected, scalable and integrable with third party software to overcome complex challenges with standard building blocks. The platform consists of a great set of development tools. The **Real time Database** and **Cloud Fire store** can stock document-structured data and synchronize the corresponding apps in milliseconds whenever a data transformation occurs. This means that both the app and its database listen to each other, providing the user with reactive app experiences. And Firebase cloud functionscan even extend this functionality. These functions allow the developer to write backend code to respond to events happening in the Firebase platform without having to deal with any servers.

For example, a Cloud Function can send a notification to the app whenever something is happening in the database. Pretty neat, right? And there's more. With Firebase **Authentication**you can verify users through both social and e-mail logins and manage them securely. Firebase **Hosting** can deploy both static and dynamic content to web apps and **Cloud Storage** can accumulate and serve a huge amount of files. Last but not least, there's **ML Kit**. This module brings machine learning to your app with ready-to-use APIs and custom models using Tensor Flow Lite, an open source machine learning platform by Google.  
  
Firebase can also improve your app quality when development is done. The **Crashlytics** module gives a real-time overview of the issues your users might encounter. Your app's performance can also be monitored by using the **Performance Monitoring** tool and **Test Lab**tests your app on a range of devices to make sure that everyone gets the same user experience. The platform has its own Analytics and Prediction modules to get a better understanding of your users' behaviour and, for This module brings machine learning to your app with ready-to-use APIs and custom models using TensorFlow Lite, an open source machine learning platform by Google.

Firebase can also improve your app quality when development is done. The module gives a real-time overview of the issues your users might encounter. Your app's performance can also be monitored by using the tool and tests your app on a range of devices to make sure that everyone gets the same user experience. The platform has its own Analytics and Prediction modules to get a better understanding of your users' behavior and, for example, target specific audiences using **In-App Messaging**. App notifications can also be sent through the platform and there's even an A/B Testing tool to experiment with new functionalities. Are you familiar with those links which can redirect you to a specific screen in an app? Well, Firebase can do that too.

## MODULES USED

## REACT MODULES:

## MATERIAL UI: In a nutshell, Material-UI is an open-source project that features React components that implement Google's Material Design. ... With over 35,000 stars on GitHub, Material-UI is one of the top user interface libraries for React out there.

## REACT-BOOTSTRAP: React-Bootstrap replaces the Bootstrap JavaScript. Each component has been built from scratch as a true React component, without unneeded dependencies like jQuery. As one of the oldest React libraries, React-Bootstrap has evolved and grown alongside React, making it an excellent choice as your UI foundation.

## REACT-ROUTER: React Router is a standard library for routing in React. It enables the navigation among views of various components in a React Application, allows changing the browser URL, and keeps the UI in sync with the URL. ... The application will contain three components: home component, about a component, and contact component.

## REACT-LEAFLET: It's a light-weight, open-source mapping library that utilizes OpenStreetMap. In this article, we'll see how to use React-Leaflet to render Leaflet maps inside of your React app. We'll show markers with custom icons, and display a popup on the map when clicked.

## JAVASCRIPT LIBRARY:

**CHART.JS:** Chart.js is a Javascript library that allows designers and developers to draw all kinds of charts using the HTML5 canvas element.

Chart.js offers a great array of simple, clean charts including animated and interactive versions. It's an easy way to include beautiful and engaging charts into your website for free.

**Features**

Eight different chart types, all animated and customizable

Mixed chart types provide a clear visual distinction between datasets

Great rendering performance across all modern browsers (IE9+)

Redraws charts on window resize for perfect scale granularity

**HOASTING**

NETLIFY:

Netlify is a web developer platform that multiplies productivity.

By unifying the elements of the modern decoupled web, from [local development](https://www.netlify.com/products/dev) to [advanced edge logic](https://www.netlify.com/products/edge/), Netlify enables a 10x faster path to much more performant, secure, and scalable websites and apps.

Our bet on the [Jamstack](https://jamstack.org/) is quickly coming true. The web is rapidly changing away from monolithic to decoupled apps, and web developers are storming ahead with more power than ever. Netlify is built to cater to that movement, and in just a few years we’ve on-boarded more than a million businesses and developers, and are building and serving millions of web projects daily around the globe.

## TEAM MEMBERS IN PROJECT:

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