App for covid tracking live Active, Dead and Recovery cases globally

Ms. Sudheshna Jinna[1], Ms. Sudagani Sanjana [2], Ms. Tanmayi Kasthuri[3], Ms. Palvai Varshini [4]

[1]*Sudheshna Jinna, B Tech, Department of Computer science and engineering*

Geethanjali college of engineering and Technology, Hyderabad, TS, India 501301

[2]*Sudagani Sanjana, B Tech, Department of Computer science and engineering*

Geethanjali college of engineering and Technology, Hyderabad, TS, India 501301

[3]*Tanmayi Kasthuri, B Tech, Department of Computer science and engineering*

Geethanjali college of engineering and Technology, Hyderabad, TS, India 501301

[4]*Palvai Varshini, B Tech, Department of Computer science and engineering*

Geethanjali college of engineering and Technology, Hyderabad, TS, India 501301

---***---

Abstract

The deadly novel Coronavirus is being spread since 2019 and has affected a great deal. The lives of innumerable are lost. Moreover, the rising of infectious illness includes quick spreading and imperiling the health of individuals. Therefore, this requires prompt activities to break down the infection at the community level. Answers are offered for the issue of the Coronavirus. It is an online platform that enlightens us with the latest and reliable news on Covid-19. The goal of the application is to estimate the insights of Covid's current cases, deaths, and recuperations of the relative multitude of nations through API. Also, general knowledge of the virus is provided, such as symptoms, precautions, and common myths held. Through this platform, people can know information about the current situation in a particular country, and the demographics are accurate. It is a user-friendly application with elegant visuals allowing people to use it easily. To prevent this lethal disease, end users can trust the figures and try to take related precautions. This track gets general society far from unsubstantiated news and to try to avoid panicking in the circumstance. It also helps in further developing reaction time and helps to arrange with propelling assist in advance by reducing danger.

***Key Words*:** Covid, track, statistics, API, symptoms, cases analysis.

1. INTRODUCTION

The Coronavirus has found its way into the world at the end of 2019, slowly spreading to numerous countries. People were affected in massive numbers. COVID-19 causes severe acute respiratory syndrome (SARS), which causes shortness to inbreathe, also loss of speech and movement. Just by the aerosols released through an infected individual by coughing, sneezing, talking, singing, and breathing, the virus can be spread. Also, by touching the contaminated surface which is already been in contact with the infected person, a person can be attacked. The infection spreads all the more effectively inside and in jam-packed settings. Since its flare-up in December 2019, more than 2,573,143 cases have been affirmed worldwide starting on 21 April 2020. On viewing its effects on the individuals, World Health Organization (WHO) has declared the virus attack as pandemic on March 11, 2020. Coronavirus not only disturbed the health of people's lives, but also, businesses, travel, and worldwide exchange and thus, needed several measures to control the spread of infection. In numerous nations throughout the planet, residents have been prescribed to remain at home and practice social distancing as far as might be feasible as an essential proportion of forestalling the spread of COVID-19. Every association is working consistently to recognize the most inescapable reports that might conceivably hurt the general's wellbeing, for example, incorrect anticipation measures or claims of fixes. These myths are then refuted with proof-based data. WHO is disclosing health data and guidance on the COVID-19. COVID-19 has pushed the boundaries of necessities involving technology at the front line for eradicating the dangers by physical contact. Portable innovation has been utilized in various manners to control the spread of COVID-19. To ensure the social distance policy, mobile apps play a huge role, since it is fairly accepted and easily adopted by the humankind. They need to be generally evolved and carried out

during the earlier months with an end goal to "level out" of the expanding number of COVID-19 cases, giving information and data to regular folks while endeavoring to ease the pressing factor from health care systems.

2. EXISTING SYSTEMS RELATED TO COVID-19

Covid-19 breakdown produced chaos in an eclectic range. Arogya Sethu was launched by the government of India to track if any covid positive patient is located in the nearest distance or vicinal areas. The app is designed to track based on the number of users downloading it. Henceforth, this failed to captivate huge mass narrowing down its aspects.

It only works on active Bluetooth applications to get the information of the affected victims.

Bihar Saathi application by iBihar.org to help individuals in Bihar with medical problems. It catches subtleties of the individual raising the SOS alongside their geo-arranges, that is their definite area, and offers it with the 'significant government division for redressal'. Also, the application gives data about different drives and plans by the public authority that brings issues to light with regards to the different medical problems including episodes (Bihar Saathi 2020).

CoBuddy-Covid 19 Coronavirus Help Tool-to assist with halting the spread of Covid 19, get data and help from the Government. The application ensures that individuals isolated are inside their area, discuss straightforwardly with them, give data, and get cautions if the isolated are needing any assistance. The area following and client confirmation with heat-maps, correspondence the executives, notices and cautions, wellbeing following and input, fundamental activities the board (CoBuddy-Covid19 instrument 2020)

3. IMPLEMENTATION

This application provides 5 major functionalities and the built-in UI helps the user the ease to traverse through the different widgets. The home screen consists of aligned buttons each having a respective assigned task. Google Has launched an open-source UI software development kit known as Flutter (see Figure 1), that helps in developing applications that are congenial with websites, android, and iOS. A programming language that is created by google for server and desktop applications is a dart that serves to build server and desktop applications. It is class-based, object-oriented having C style syntax for garbage collection. Android studio or visual studio software is used to develop user-friendly applications. An emulator is a tool that helps in getting the virtual device on

your computer by mimicking the architecture of the device.
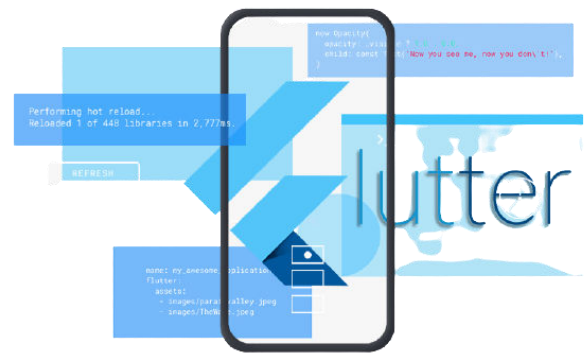
Figure 1: Showing the Flutter programming

An application programming interface is a medium that gives the feasibility for the two applications to communicate with each other by transmission and retrieval of the required data as per requirements (see in Figure 2). It is designed for generic connectivity to an application.
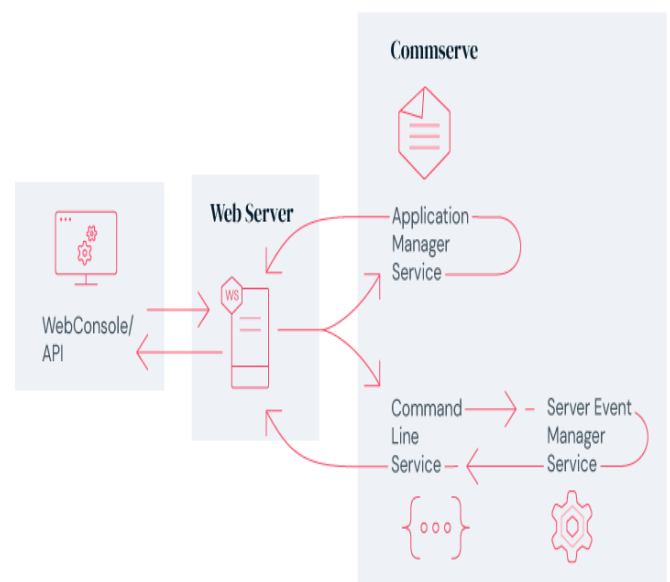

Figure 2: Represents the working of API architecture and resembles the mechanism involved in accessing the information.

API used for this application is News API which is simple and gives reliable updates that have been stored in the database. REST API reverts the JSON search results by communicating through contemporary as well as previous articles that were published or uploaded in about 80,000 global sources. This API supports 14 languages from over 55 countries giving JSON results by simple HTTP get and post requests. As well, the SDK available in the particular language is used in communicating with the request made. RESTful APIs apply the HTTP methodologies and have less band when compared to Simple Object Access Protocol (SOAP).

This application will receive all the required live reports that have been updated in the news API and thus, it will

act as a mediator between the source and application. This data is well presented to the user giving a global estimation of the impact of covid-19 as shown in Fig 3.
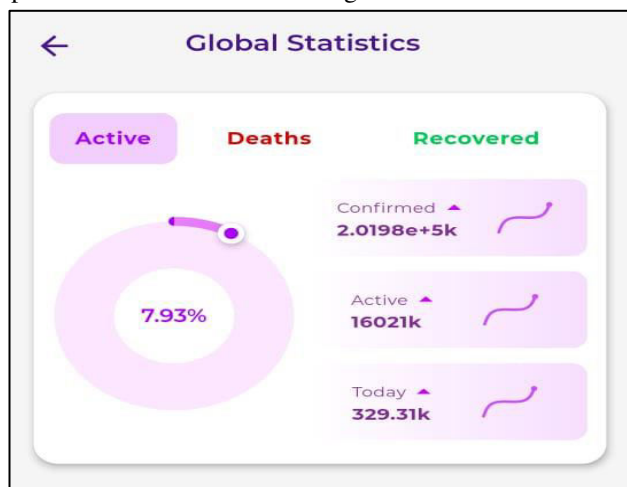
Figure 3: Visuals of Global statics as appearing in the application.

4. RESULTS

The home screen is designed to display 5 main functions. The first page named statistics is shifted to a page where global crisis figures of active death and recovery are shown along with the percentage compared with the world population. Henceforth, it provides the most precise and reliable news blatantly without any concealment. On this page, we can search for the country for which the user wants to get the live updates of the pandemic (as shown in Fig 4)


Fig 4: screen to search specific country

The bottom flag button helps to set a default country that saves time instead of searching for the most frequently visited country every time. A country that is set as default displays the live and precise updates on covid-19 for that day surge and plunge of cases is diagrammatically depicted (Fig 5)

Fig 5: default country page

The second functionality of the application is to give awareness to the user about all the possible symptoms that a person who is affected with covid-19 possesses. The animations used for the page are significantly captivating to the user (see Fig 6).
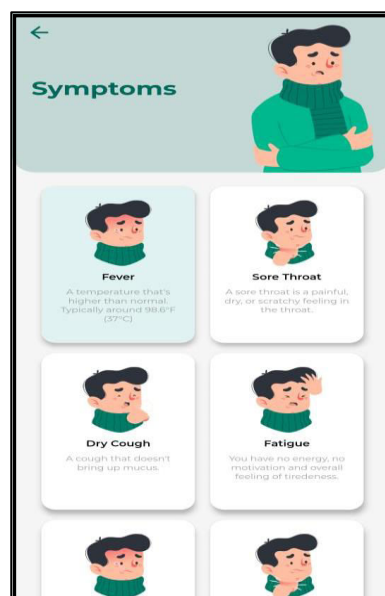
Fig 6: Symptoms are seen in covid positive patient

Day-to-day measures need to be taken to be safe from the pandemic that is booming and vandalizing people's lives. This application provides a page for precautions that need to be meticulously followed to be away from being the prey of this virus. Most prescribed precautions and guidelines suggested by the global organizations and numerous health organizations as well as, doctors prescribing other precautions

for the safety of mankind are given on this page with the proper images helping users to understand without hectic reading of the whole details (see Fig 7).
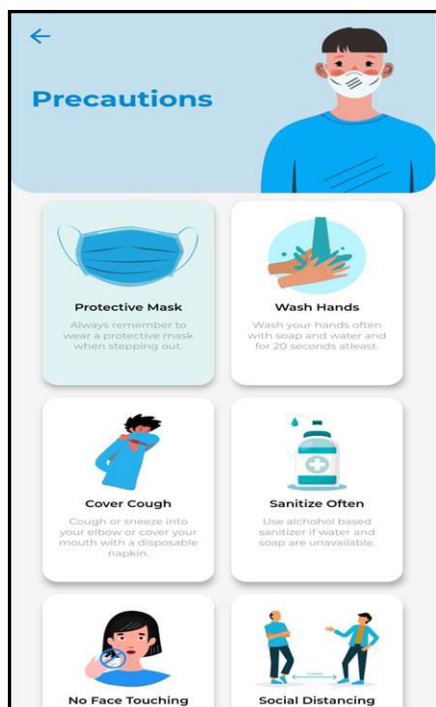

Fig 7: Precautions needed to be taken

Covid has many uncanny assumptions that are estimated by various scientists. Where each intellectual concluded their thesis. There are plethora of such myths which are bundled together to inform the user and helps them to come out from the state of oblivion. (see Fig 8)
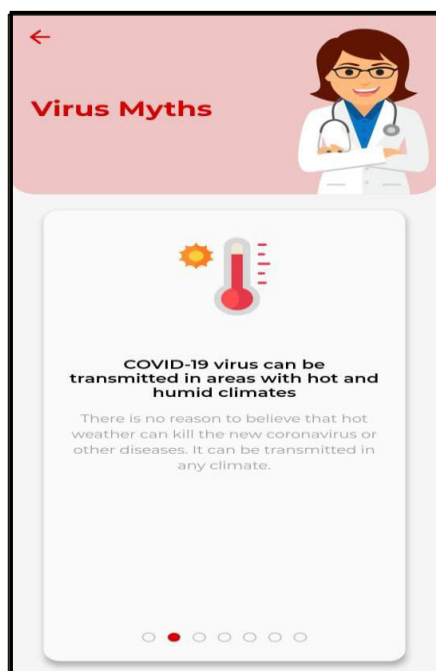

Fig 8: Myths on covid

The fifth button helps in traversing to the page where the description of a past present of the covid history is evaluated and described. Origin of pandemic and information

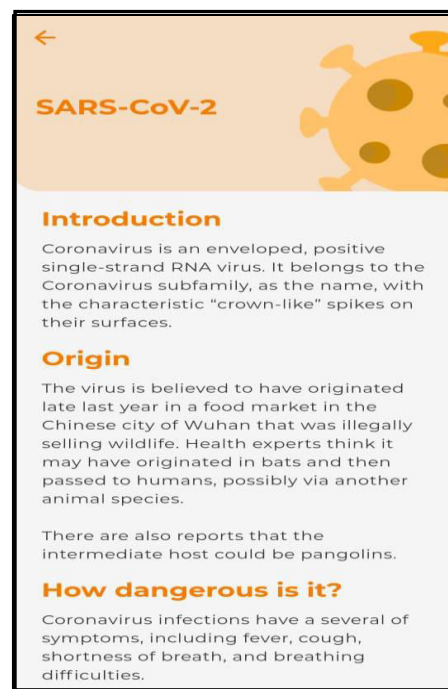on the impact of covid on normal people that vandalized many (See Fig 9).

Fig 9: History of Covid pandemic

5. METHODS

SEARCH SCHEME

The information is collected based on PubMed and Scopus, alongside the worldwide datasets and databases on COVID-19 created by the WHO, which were looked into to recognize the papers that solely depended on the mobile applications coded for COVID-19. They in turn are created for the real-time environment and also, validated by professionals, for treatment and anticipation.

CRITERIA

In this context, the standards for study choice were accompanying: all the components involved in COVID tracker application in conjunction with data available for users, use of API through which information is obtained through a global database, programming languages used to achieve the goals, figures containing the execution results of the application, proof that information is reliable, and can be used in real life.

6. CONCLUSION

Application in mobile has ended up being a significant instrument for residents and healers in confronting basic difficulties forced by the pandemic. Few among these are easing the dependency put on hospitals, updating and providing access to reliable information, tracking down

contemporary predictors, keeping tabs on the symptoms of individuals. COVID-19 is still an obscure infectious disease, which means the statistics of the SEIR(Susceptible-Exposed-Infectious-Removed) prediction can be clear only after the outbreak comes to an end. In such situations, data transparency is crucial for people to be aware of how deeply it's affecting people in their surroundings. Moreover, it is also our responsibility not to spread unverified news to prevent people from panicking and giving them hope yet making them prepared to face the abrupt circumstances. Also, a platform like Covid tracker will assist the government and authorities to propagate the verified articles and advocate good personal hygiene to the people. The Covid Tracker project shows the gravity of information propagation that can help in improving response time, and help in prior planning to reduce the chances of risk. Our paramount goal is to give verified statistics to the world though further studies need to be done to help contain the outbreak as soon as possible. This paper is as yet a continuous exploration as a lot more examinations in regards to this sickness can be done. Yet, the covid tracker serves as the beginning phase of the research that revolves around this global pandemic.

7. REFERENCES

[1]   Binti Hamzah FA, Lau C, Nazri H, Ligot DV, Lee G, Tan CL, et al. CoronaTracker: Worldwide COVID-19 Outbreak Data Analysis and Prediction. [Preprint]. Bull World Health Organ. E-pub: 19 March 2020. DOI: http://dx.doi.org/10.2471/BLT.20.255695.

[2]   Amann J, Sleigh J, Vayena E (2021) Digital contact-tracing during the Covid-19 pandemic: An analysis of newspaper coverage in Germany, Austria, and Switzerland. PLoS ONE 16(2): e0246524. https://doi.org/10.1371/journal.pone.0246524.

[3]   Aarogya Setu (2020) https://play.google.com/store/apps/details?id=nic.goi.aarogyasetu&hl=en

[4]   JonatanAlmagor & Stefano Picascia, Exploring the effectiveness of a COVID-19 contact tracing app using an agent-based model, https://doi.org/10.1038/s41598-020-79000-y.

[5]   World Health Organization. Coronavirus disease pandemic. https://www.who.int/emergencies/diseases/novel-coronavirus-2019 (2020).

[6]   "Coronavirus Disease 2019 (COVID-19)" Centers for Disease Control and Prevention, 2020. [Online]. Available: https://www.cdc.gov/coronavirus/2019-ncov/about/symptoms.html. [Accessed 27 February 2020].

[7]   Stoecklin, Sibylle Bernard, Patrick Rolland, Yassoungo Silue, Alexandra Mailles, Christine Campese, Anne Simondon, Matthieu Mechain, et al. "First cases of coronavirus disease 2019 (COVID19) in France: surveillance, investigations and control measures, January 2020." Eurosurveillance 25, no. 6 (2020).

[8]   Jia, L., Li, K., Jiang, Y., Guo, X. (2020). Prediction and analysis of Coronavirus Disease 2019. arXiv preprint arXiv:2003.05447.

[9]   The Government of India. 2020. Live updates from Worldometer. Retrieved from **https://www.worldometers.info/coronavirus/country/india/**

[10]   Jinfeng Li and Xinyi Guo. 2020. COVID-19 Contact-tracing Apps: A Survey on the Global Deployment and Challenges. Retrieved from **https://arxiv.org/ftp/arxiv/papers/2005/2005.03599.pdf**.