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COVID 19 Android Application

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Abstract: To track the massive spike of the cases in this pandemic situation of corona virus or technically known as COVID-19, we decided to create an Android application. This corona virus was first discovered in China and then from there it started spreading all over the world and to track the record of the cases, deaths and recovery we decided to develop an Android application. This application was developed to spread awareness in our country (India) about this situation. This app provides the information about the COVID-19 cases, the confirmed cases, the total deaths, total recovered patients and the active cases in our country (India). This app shows the above mentioned details of our country (India) and the foreign countries too. Even this application shows the state wise information. All the symptoms and the steps to take against the corona virus is available in the application. Red zone areas and the helpline numbers are available of all the states of India. This application provides the live information of cases in numbers.

With this application the people will get aware of the situation and even they can check whether they are in the red zone area by searching in the application. The users can see the active cases, total confirmed cases, total death, total diseased people, and total people who fought against this virus and had won (recovered people) of all the states in India and even get helpline numbers of all the states. We have created this very simple and straight forward application which make it very easy to use and its UI is user friendly easy to understand. All the provided information is perfect and accurate. The information provided in the application is taken from WHO (World Health Organisation).

Keywords: "Corona Virus", "COVID-19", "Cases", "India", "Awareness", "Pandemic"

I. INTRODUCTION

In this pandemic situation of contagious coronavirus, or more commonly knowns as COVID 19. First this virus was discovered in China in November 2019 and started spreading all over the world. On July, 2020, more than 17M cases of COVID-19 were reported. This COVID-19 situation is listed as the pandemic by the WHO (World Health Organisation). But along with the rise of COVID-19 cases, there are lot of applications create by lot of COVID-19 warriors. We have also created an Android application which gives information about the cases and the COVID situation to spread awareness about this pandemic situation. On January, 2020, the first case of coronavirus was discovered in India. All the corona warriors (Doctors, Nurses, Police Officers, Traffic Police Officers, Dentists, Trained Workers, etc) are fighting against this virus, so we decided to contribute from our side in this fight against corona virus. We decided to create an Android Application which can provide all the information about the active cases, total confirmed cases, total death, total diseased people, and total people who fought against this virus and had won the fight (recovered people). This app shows the above mentioned details of our country (India) and the foreign countries too. Even this application shows the state wise information. All the symptoms and the steps to take against the corona virus is available in the application even in Hindi language. Red zone areas and the helpline numbers are available of all the states of India. Our application provides the information in numbers and all the provided information is completely accurate and correct, the information is taken from the World Health organization, the US Centers for Disease Control and Prevention, National Public Radio, WHO Coronavirus, the COVID tracking project, Centers for Disease Control and Prevention, Maryland Transportation Institute ("MTI") and several other sources. It has spread so rapidly and to so many countries that the World Health organization has declared it a pandemic (a term indicating that it has affected a large population, region, country, or continent). It's very easy to download this application and see the live information provided in the application. This can be the easiest way to spread awareness about this pandemic situation to the people of our country. Even the people can share this application among their friends which will definitely spread awareness. More people get to know about this issue it will be easy to handle the situation.

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Research has shown that people are willing to share personal health data when they receive significant value in exchange. Giving up some personal freedom can lead to lifesaving benefits in times of crisis and so provide important value. The digital tracker could be presented as a safe way to end this highly onerous and in some cases unpleasant situation. It seems reasonable to think the low-effort requirement of downloading an app would be much preferred – even if it constantly tracks you. A tracking app would enable us to watch over each other so we can get safely back to work, school and something resembling our regular lives.

II. LITERATURE SURVEY

From our curated list of 34 apps, we select four typical app to further highlight key lessons we can learn with respect to security and privacy risks. The case studies are based on TraceTogether, DP3T, Private Kit, and COVIDSafe.

TraceTogether: TraceTogether is a digital system that have been provided or created by the Government of Singapore. This digital system has created to provide the facilitate contact tracing efforts in response to the COVID-19 pandemic. The main purpose of this digital system or the main goal of this digital system is quick identification of persons who may have come into close contact with anyone who has tested positive for COVID-19. The system initially consisted of an app, by the same name, and was later supplemented by a physical token mainly intended for elderly and children who may not own a smartphone, or those who prefer not to use the app. The app utilises a custom protocol, BlueTrace, which allows for a distributed approach whereby participating devices exchange proximity information whenever an app detects another device with the TraceTogether app installed. The protocol, and reference app implementations of it, were also open sourced as BlueTrace and OpenTrace respectively.

DP3T: This DP3T (Decentralized Privacy-Preserving Proximity Tracing) is an open protocol developed in response to the COVID-19 pandemic, and was introduced on April, 4, 2020. This open protocol is created to provide or to facilitate digital contact tracing of infected participants. This is software or application is created for the Android and iOS users, they can easily download this application in their smart phones. Even DP3T is safe for using as the central reporting server never has access to contact logs nor is it responsible for processing and informing clients of contact. Because contact logs are never transmitted to third parties so, it has major privacy benefits. In contrast to TraceTogether, the app does not implement any root detection capabilities. This means that a malicious app could possibly access the database directly and manipulate the database containing COVID-19 contact records. Potentially, an adversary could spread false-positive. We didn't want to spread a false-positive so we decided to overcome this issue.

Private Kit: Similar to DP3T, Private Kit does not encrypt the database and contains plaintext data. Besides, the app creates temporary JSON files to store user's location data. Without any encryption and root detection, the temporary JSON files can be dumped from root devices; thus increasing the risk of privacy leakage. So we decided not to include this feature and keep our users safe form these all breaches taking place.

COVIDSafe: According to our experiments, COVIDSafe stores all tracing histories, including contacted device IDs and timestamps, into SQLite database with plain text. Since the application does not implement a root detection logic, tracing histories may be leaked from root devices and potential Linkage Attacks can be implemented. But in the later update they fixed this issue, so this was actually a good step and we decided to implement this type of feature in our application.

III.DISCUSSION

Our main finding is that, despite that the current research evidence is fragmented and requires greater methodological rigor, mobile apps have been found to benefit citizens, health professionals, and decision makers in facing the COVID-19 pandemic. In particular, mobile apps can help in solving several COVID-19–related challenges by increasing the reach of reliable information to both citizens and health professionals, decreasing misinformation and confusion, tracking symptoms and mental health of citizens, home monitoring and isolation, discovering new predictors, optimizing health care resource allocation, and reducing the burden of hospitals.

Although mobile apps are successfully used for managing chronic diseases, in the ongoing COVID-19 pandemic has pushed the need for the mobile app solutions at the forefront to reduce the risk of the cross-contamination caused by close contact. Mobile technology has been leveraged in a number of ways to control the spread of COVID-19. As the lot of information is provided in the application like all the details of COVID-19 situation (total cases, confirmed case, total recovered, etc); symptoms of COVID-19, majors or steps to take against the corona virus, red zone areas, helpline numbers, etc; for the awareness of the people. These all information are completely accurate and the users can on rely on the data provided in the application.

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IV.RESULT





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Goa		14156	7
Gujara	t	77622	0
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Himac	hal Pradesh	17272	2
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Jharkh	and	32488	4
Karnat	Karnataka		4
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V. CONCLUSION

From this study we conclude that Mobile apps are considered to be a valuable tool for citizens, health professionals, and decision makers in facing critical challenges imposed by the pandemic, such as reducing the burden on hospitals, providing access to credible information, tracking the symptoms and mental health of individuals, and discovering new predictors. And spreading awareness among the people through a simplest possible way, not only the people get aware of this pandemic situation of COVID-19, they also get lot of information about the situation around them. As this application provides the information of active cases, total confirmed cases, total death, total diseased people, and total people who fought against this virus and had won (recovered people) of all the states in India, and along with it this application also shows information about the other countries (example: USA, Afghanistan, Brazil, etc). As this application is particular built for the Indian user so, this app also shows the red zone areas in India. The symptoms of corona virus are also available, even the majors or the steps to take against corona virus are also shown . All the helpline numbers are also provided in this application according to the states. It can also be concluded that it is a promising application that can help people to be safe from coronavirus. The application has useful features and impressive architecture. Even the user interface (UI) is beautiful that user-interactivity was properly kept in mind during the development of the application. So as overall, this application is complete pack of all the important information needed for an individual user.

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