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Citizen Information Feedback of Maintenance of Road (CIFOMOR)

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Abstract: When people come across certain damages caused in their environment they don't know whom to approach or where to approach such that, they would leave it to be unnoticed which might lead to several accidents.
In order to overcome these sorts of issues we have developed our mobile application such that every user can raise complaints regarding the issues that they come across and can get to know about the action took with respect to their queries.
Keywords: Road Maintenance, Android App, Feedback, Environment Issues, Forum.

I. INTRODUCTION

This application provides an effective way of getting connectivity with the authorities who are responsible for maintaining the ecosystem. It also provides other users to vote how important the issue tends to be.

This application requires registration of users, such that no anonymous person can post unwanted posts. Registering in this application requires doesn't involve in getting any personal information except their mail address. The application makes the post's visibility to be public, such that any issue raised by anyone is open to be solved by anyone. Apart from that every user has the privilege.

A. Existing System

There is an application called Meri Sadak which requires many personal information for users who logs in.

1) Disadvantages In Existing System

a) One of the major issue is that it isn't active.

b) Many unwanted mandatory fields where present in the application.

c) The issues raised is not publicly visible such that it doesn't encourage other users to raise issues.

d) User needs to undergo several process to provide their issue.

B. Proposed System

The system poses different type of approach towards the users of this application. Every user are made to easily post their issues that they come across.

A. Advantage In Proposed System

a) Doesn't require any personal information of the user.

b) The posts are made publicly visible.

c) Vote on the other issues that are raised to denote severity.

d) Users can post their issues once they enter their credentials.

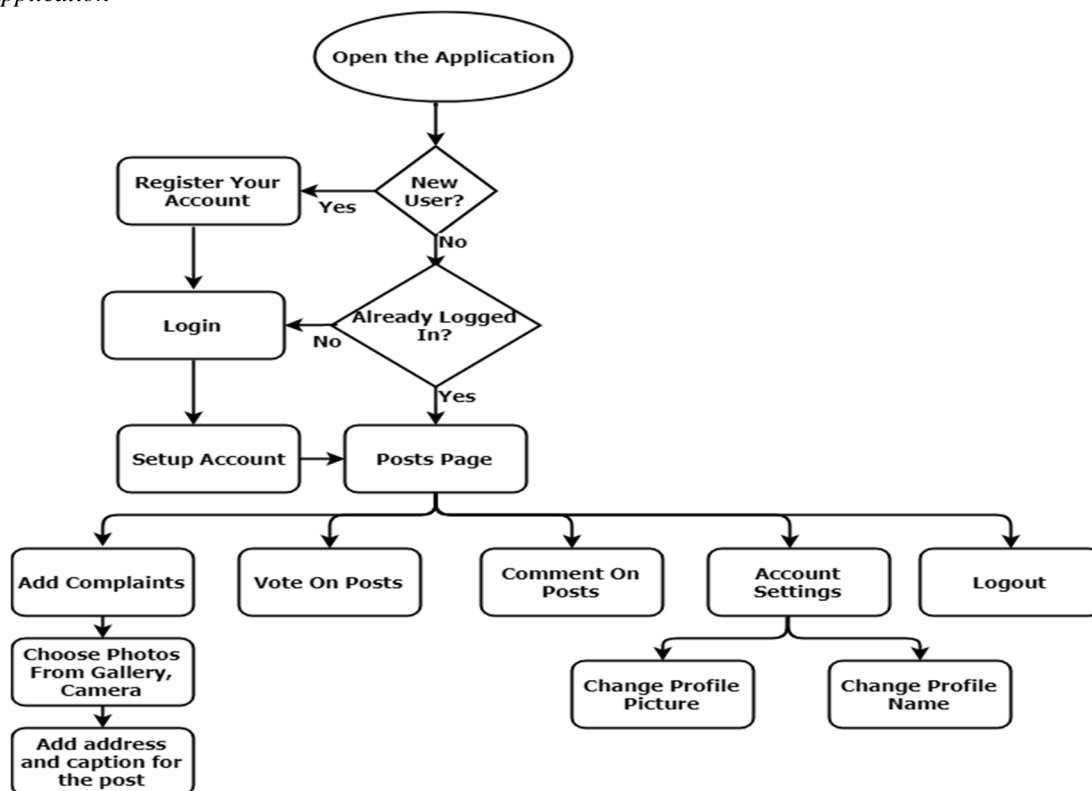## II. METHODOLOGY

A. Flow of Application

Figure 1: Flow Diagram.

Initially the user will be directed to the login page once they install it, they can be able to register and login with their credentials. Once they login they would be able to setup their account such that they can upload their profile picture and their profile name. After setting up their account the user will be directed to the home page which displays list of issues that were raised by other users and its captions along with the votes that it has got, Users are provided with the privilege to comment regarding the issue that has been posted. The Home page comprises of the add option which is used to create an issue which is to be comprising the photo of the issue and a description, describing the particular issue.

B. Services
1) *Fire Base Fire Store:* The Cloud Based realtime database with more powerful queries and automatic scaling.
2) *Fire Base Storage:* Used to store and retrieve files from user storage.
3) *Fire Base Authentication:* Used to Authenticate Users.

III. SYSTEM REQUIREMENTS

A. RAM - 4GB
B. Processor - Intel (or) AMD
C. OS - Windows (or) linux
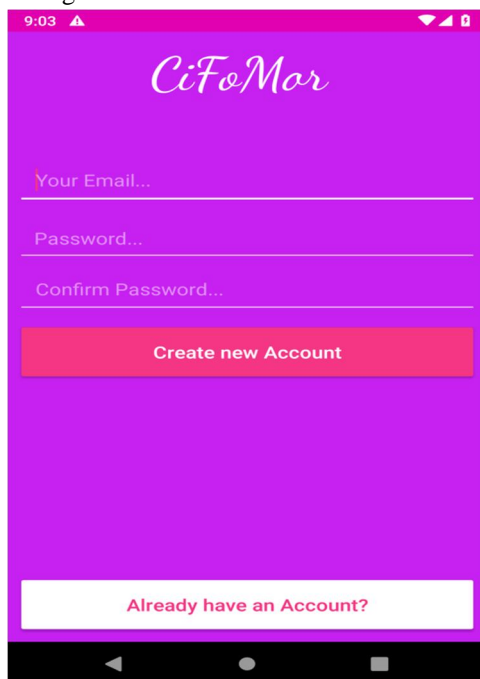*D.* IDE - Android Studio

IV. MINIMAL REQUIREMENTS - USER

A. OS - Android 4.2 and above
B. Network Connectivity

V.   MODULE IMPLEMENTATION

A.   Registration

Registration require only valid credentials such that no other personal information has been required. These information has been stored in the FireStore with user's password being hashed such that no one can be able to get to know the credentials of the user.
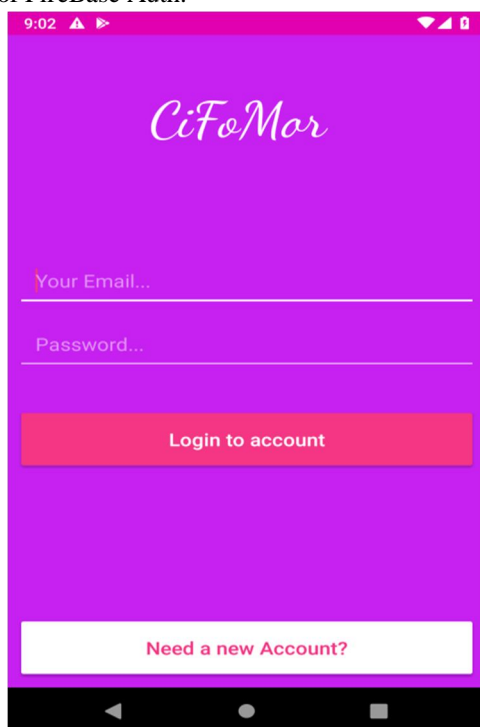
Figure 2: Registration Setup

B.   Login

Every user is authenticated using firebase authentication service such that no user is provided to post queries anonymously. Authentication is carried out with the help of FireBase Auth.

Figure 3: Login Page

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C. Account Setup

The First time a user logs in they would be directed to setup their account. Every user can setup their account with their username and profile picture anytime, where profile picture is non mandatory.These information are stored in FireStores Database and the file uploaded is stored in the FireBase Storage, whereas every photo that they upload are provided with a feature to crop in the application.
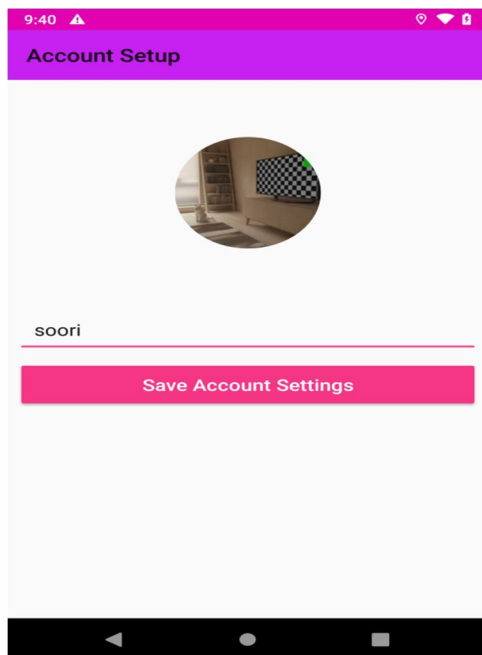

Figure 4: Account Setup

D. Home

The Home page of this application comprises of the issues that were posted with its associations such as caption and address along with the votes that it posses with comment button, along with add button which is used to add posts. This Home page acts as a blog as it allows to communicate every user to every other user.
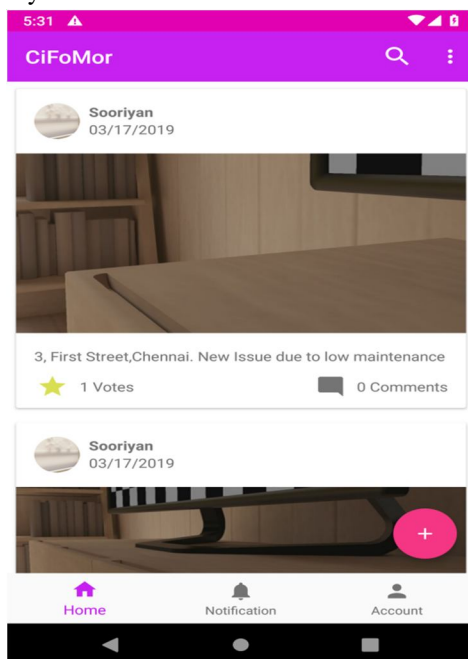

Figure 5: Home Page

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E. Add Post

This page is used to post issues which is requires the address or landmark of the issue that is observed. Every file they upload would be available in the FireBase Storage such that any post that has been added irrelevant to the cause can be deleted with the console provided by FireBase.
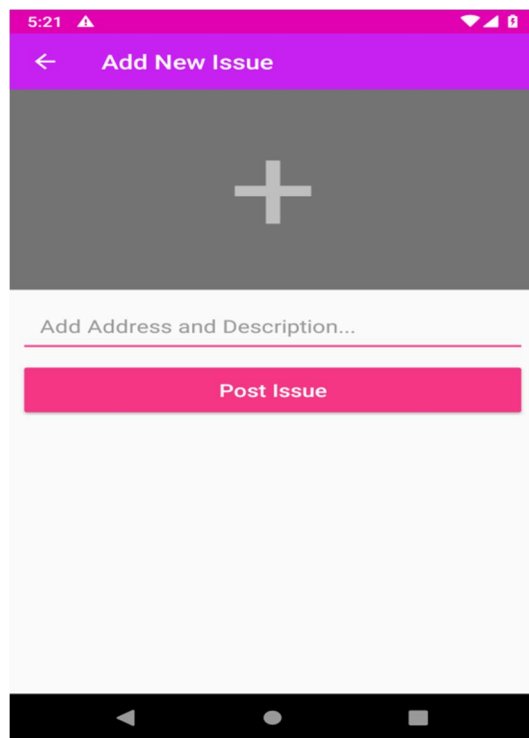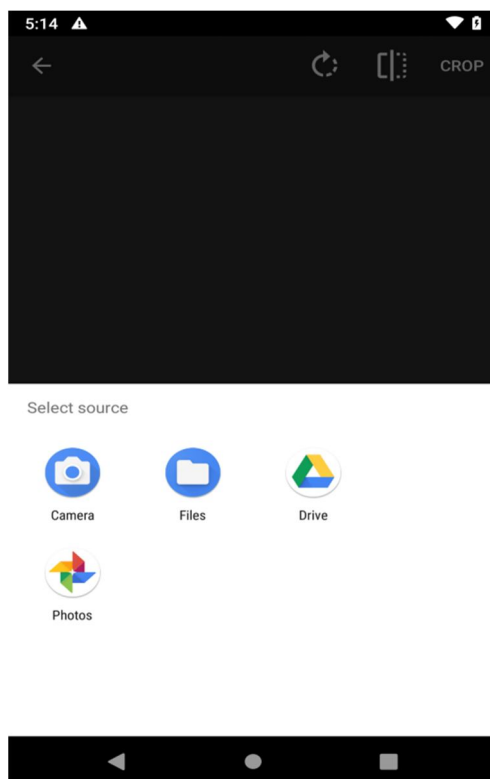

Figure 6: Add New Issue

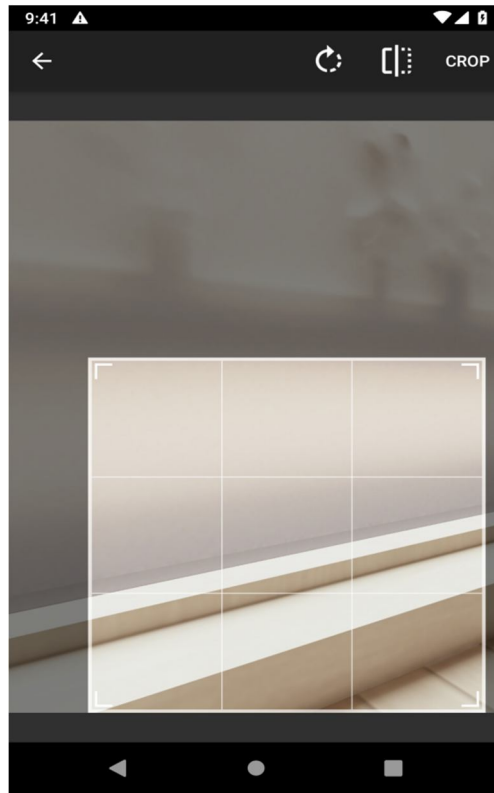Figure 7: Choose the image from the below displayed options.

Figure 8: User can crop the image to highlight the area which is to be posted for the issue.
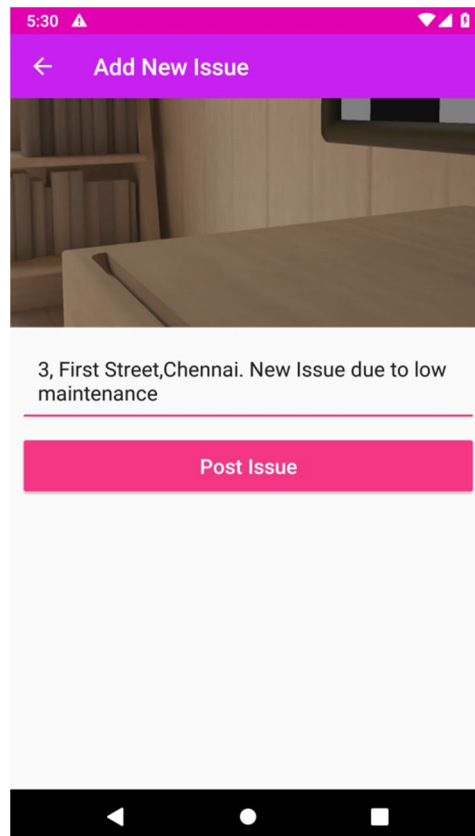

Figure 9: User can add the address and other details regarding to the posted issue and can mention the previous issues.

F. Comments

This page comprises of the comments that are posted with respect to the particular post selected by the user. Comments are subjected to be used for maintaining the issue status and to get the view of other users regarding the issue that has been raised.
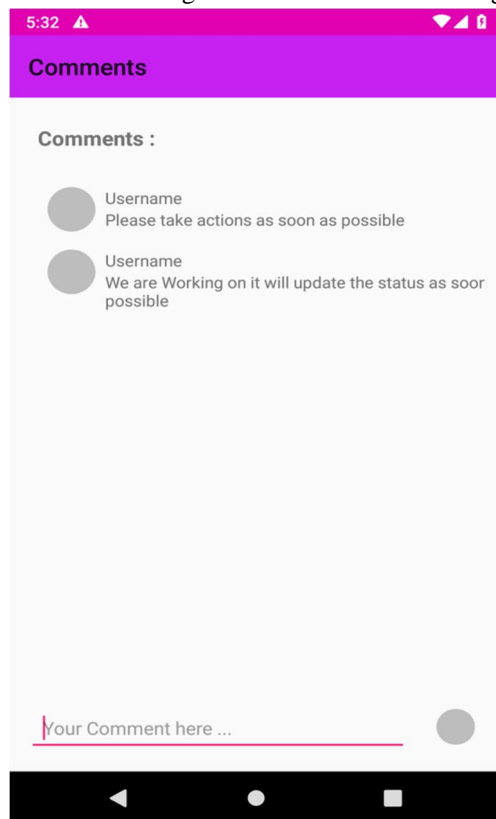

Figure 10: Comment Section

VI. FUTURE ENHANCEMENT

Enhancing the application can be done with making push notifications and getting current location when the user posts a issue.

VII. CONCLUSION

We conclude that our application will reduce accidents caused due to lack of road maintenance and to ensure a safe environment to the citizens.

VIII. ACKNOWLEDGEMENT

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