Rural Drinking Water Supply Using Application

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--ABSTRACT--

Now a day, water becomes basic requirement need in the environment. In the world 80% of diseases are associated with water is been estimated by world health organization (WHO). So we provide the way by offering service providing and monitoring for the water. In our project we connect the supplier with the customer using an Android application. It is very useful to the customer to order water for a month or for a particular day and the required accessories.

Keywords- **Android Studio, Firebase Authentication, Firebase Database, Chabot**.

I. INTRODUCTION

Human begins needs water as the basic need for the survival and development. Now a day's water become demanded, which affects the basic life of the rural area peoples. Water is very basic need for both living and non-living things, which becomes basic need for determinant standard of living. Traditionally, most of the peoples in the rural areas take water from the unprotected ponds or tanks, wells, cisterns and sometimes in streams and rivers. These water sources are frequently used for drinking and cooking, washing clothes, bathing, Livestock washing, etc. Infections are transmitted through living carriers which found are in water bodies. Infections are spread by insects that depend on water. Infections due to the lack of sufficient water for personal hygiene .These ailments potentially constrain human resource development and productivity, especially of the poor. While governments attempt to provide adequate and safe drinking water to all households, supply and demand side factors determine the level of water availability. Hence, the role of organized water supply in the prevention of water-borne diseases and in the promotion of public health can be well appreciated.

II. LITERATURE SURVEY

1.1. Rural Drinking Water Supply in Karnataka
The Rural Drinking Water-A Case Study of Mysore Thaluk revealed the following findings…? Total households using tapped water (treated) in Karnataka is only 41% and tapped water (untreated) is about 25%.

1.2. Drinking water supply management in municipal corporations of Maharashtra
This paper measures the demand and supply of drinking water in Municipal Corporations in Maharashtra. The demand for drinking water is continuously increasing due to growth of population, industrialization and commercial units. Drinking water is not provided on a sustainable basis in the municipal corporations. Water has price in terms of time, space, quality and quantity

1.3. Monitoring Rural Water Points in Tanzania with Mobile Phones: The Evolution of the SEMA App
In this paper, they main focus is on mobile phone-based ICT platform for water services, called Sensors, Empowerment and Accountability in Tanzania (SEMA), developed by team in the context of an action research project in Tanzania. Water users in villages and district are mostly engineers in local governments can use it to monitor the functionality status of rural water points in the country.

III. EXISTING SYSTEM

It deals with only ordering and supplying of required services Delivering of products is delayed due to lack of distance. No links between the suppliers for the betterment of providing services.

IV. DRAWBACKS

- Delayed in providing services.
- Lack of location identification.

V. PROPOSED SYSTEM

Developing an Android application for linking between the suppliers like chat for providing the services through sharing of location at the required time by making themselves Interconnected. Also helps in building the bridge between the customer and the supplier.

VI. ADVANTAGES

- Location sharing and time management.
- Providing of linked services.

VII. MODULES

7.1. Home Module
In this module, we have created the login, signup page for both admin and customers, once we have signed up to the application, again we can login by using valid email and password. In Home page it contains contact and help pages to help the customers whenever they have any queries.
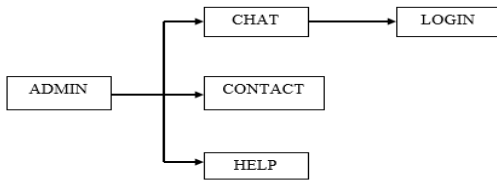
VIII. SYSTEM ARCHITECTURE
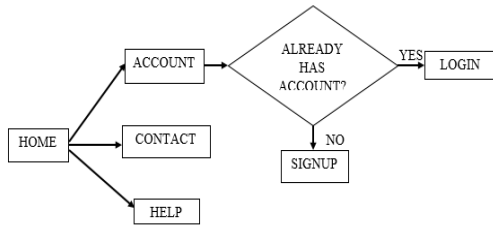
7.2. *Customer Module*

In this module, Customer can order the water bottles through online payment or through cash on delivery. Customers can see the status. Customers can chat with admin if they have any queries about supply, they can clear the query through the chatbot. Like home page, it too has the both contact and help page to contact directly with admin.
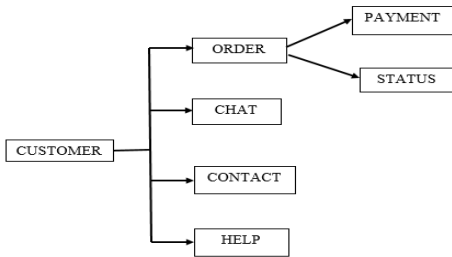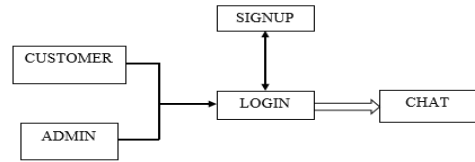

7.3. *Admin Module*

In this module, admin solves the customer queries and can also have rights to access all the customer details. Admin can chat with the customers. If admin wishes to change anything in the system, they can login with mail id and password. Admin only have the rights to modify, insert and update anything in the system.
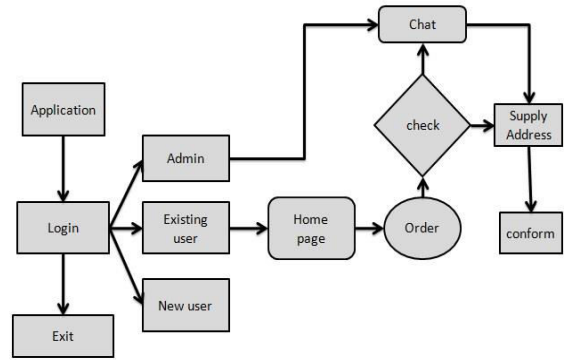
IX. SOFTWARE USED

Android Studio is the official integrated development environment (IDE) for Google's Android operating system which is built on Jet Brains' IntelliJ IDEA software and also designed specifically for native Android development. It is available for Windows, MacOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as the primary IDE for native Android application development.

Figure 2.Android Studio

Android Studio supports programming languages of IntelliJ (and CLion) e.g. Java, C++, it also supports Kotlin and "Java 7 language features and a subset of Java 8 language features that varies by platform version." The first stable build was released in December 2014, starting from version 1.0. The current stable version of Android Studio is 3.3, which was released in January 2019.

Firebase Auth is a service that authenticates users using only client-side code. It supports social login providers like Facebook, Github, Twitter and Google. Additionally, it includes a user management system whereby developers can enable user authentication with the registered email

7.4. *Chatbot Module*

In this module, the both customers and admin can sign up or login with application to interact with each other for solving the queries. The chat will be made only by the right person to whom you are dealing with.

and password login stored with Firebase.

Firebase provides with a real-time database and backend as a service. The service provides developers an API that allows datas to be synchronized across clients and stored on Firebase's cloud. The company provides client-side libraries that enable integration with platform like Android, iOS, JavaScript, Java, Objective-C, Swift and Node.js applications. The database is also accessible through a REST API and bindings for several JavaScript frameworks like Angularjs, React, Ember.js and Backbone.js. Developers who are working with the real-time database can secure their data by using the company's server-side-enforced security rules. Cloud Firestore which is Firebase's next generation of the Real time Database was released for beta use.

X.   CONCLUSION

In this paper, we have made an easy way of communication between the customer and admin. Customer can easily order water at any time and get updates about the current status of delivery. The main of our application is to make a good understanding with customer to provide a valued service at anytime.

XI.   FUTURE ENHANCEMENT

In further development, if a customer has any queries on our services they can directly contact with admin by call or by interacting with the right person. And we also provide location facility to find customer's accurate location or nearby point to share with the delivery man to achieve time consumption during the delivery process.

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