Android Messenger Application For Disabled Peoples

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Abstract- *Now a days social medias are prohibited for the disabled ones. Without any support they are not able to use these modern technologies for their purpose. So our team decided to create a android application named as insight messenger. Our main objective is to provide a messenger for peoples like dump, deaf, blind and deaf & blind, normal peoples can also use it as well as they do. We have to justify our disability in the registrations. We are using google services to do the conversions like voice to text and text to voice. The core section of the project is converting both text and voice to vibrations for those people who are deaf & blind. We are also providing a live location for the guardians to find location of the disabled people in case if they lost them.*

Keywords- Android, , Insight messenger, Disability, Voice-to-Vibration

I. INTRODUCTION

The means and ways of expression and communication are highly restricted in social media and new media discourses, for physically disabled, especially for visually and aurally challenged. Insight messenger, an android application works in android platform, which is most popular now a days. This app is totally different from other well known new age apps in terms of robustness, usability, flexibility and stability. The app is designed in such a way that it can be used by visually and aurally challenged. The text messages are converted into voice messages for visually challenged people whereas the voice messages are changed into text messages in the case of aurally challenged. For those who can't neither hear nor see, messages are delivered as vibrations. This will help the parents of such persons to know the live locations and movements of their wards.

If we provide this application or in other word disabled people use this application or software, they will be comfortable in life. The detail of this application is as under.

1. User friendly
2. Voice – to – text conversion
3. Text –to – voice conversion
4. Voice and text conversion to vibration
5. Sight board
6. Location share to particular person periodically
7. Secured
8. Portable

II. MODULES IN THE APPLICATION

Registration

In registration session, there are two type of registration available. One is for normal people and other for disabled people. The normal users who can give credentials such as username, password, gender and normal user or not.

If disabled user has to select their disability such as blind, deaf, dumb, blind and deaf etc. They has to give their guardian username and password.

Login

In login session, give username and password to login. If a user is guardian of any disabled user they can login with a option for guardian.

Text to voice conversation

Text to speech conversion specially for those who virtually challenged. They can't view the message so the message from sender text will convert to speech. Also they can sent reply to the sender by voice message.

Voice to text conversion

The Voice to text conversion those who want to send message by voice recording and it will convert to text message for those who are aurally challenged.

Sight board (Text to vibration conversion)

The Sight board for those who can't neither hear nor see, the messages are delivered as vibration. The core section of the project is converting both text and voice to vibration for those who are deaf and blind.

Guardian Map

The guardian map is to identify the location for the guardian of the disabled people in case they lost them.

III. HARDWARE AND SOFTWARE FOR APP DEVELOPMENT

Some technological requirements are wants to development of this application

Android

Android is an open source and Linux-based operating system for mobile devices such as smartphones and tablet computers. Android was developed by the open handset alliance, led by google, and other companies.

Android offers a unified approach to application development for mobile devices which means developers need only develop for android, and their applications should be able to run on different devices powered by android.

The first beta version of the android Software Development Kit (sdk) was released by google in 2007 where as the first commercial version, android 1.0, was released in September 2008.

On June 27, 2012, at the google i/o conference, google announced the next android version, 4.1 Jelly bean. Jelly bean is an incremental update, with the primary aim of improving theuser interface, both in terms of functionality and performance.

The source code for android is available under free and open source software licenses.Google publishes most of the code under the apache license version 2.0 and the rest, Linux kernel changes, under the gnu general public license version 2.

There are many code names of android such as Oreo, Nougat, Marshmallow, Lollipop,Kitkat, Jelly bean, Ice cream sandwich, Froyo, Ecliar, Donut etc.

Firebase

- Firebase is a backend-as-a-service—baas—that started as a yc11 startup and grew up into a next-generation app-development platform on google cloud platform.
- Firebase frees developers to focus crafting fantasticuserexperiences. You don't need to manage servers. You don't need to write APIs, Firebase is your server, your api and your data store, all written so generically that you can modify it to suit most needs. Yeah, you'll occasionally need to use other bits of the google cloud for your advanced applications.
- Firebase can't be everything to everybody. But it gets pretty close.
- Firebase storage provides a simple way to save binary files—most often images, but it could be anything—to google cloud storage **directly from the client!!!**
- Firebase storage has it's own system of security rules to protect your gcloud bucket from the masses, while granting detailed write privileges to your authenticated clients.

Android studio

Android studio is the official Integrated Development Environment (IDE) for Google's android operating system, built on jetbrains' intellij and designed specifically for android development. It is available for download on windows, macos and Linux based operating systems. It is a replacement for the eclipse Android Development Tools (ADT) as primary ide for native android application development.

Android studio was announced on May 16, 2013 at the google i/o conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0.the current stable version is 3.0 released in October 2017.

IV. DESIGN AND IMPLEMENTATION

System Design

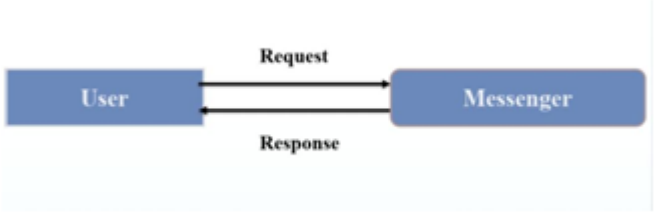
This project follows object oriented approach and Unified ModelingLanguage(UML) is used for design specification of the system. This includes use case diagram ,activity diagram and dataflow diagram.

Data Flow Diagram (DFD)

Data Flow Diagram (DFD) or a bubble chart is a network that describes the flow of data processes that change, or transform, data though out the system. This network is constructed by using a set of symbols that do not imply a physical implementation it is a graphical tool for structured analysis of requirements. Dfd models a system by using external entities from which data flows to a process, which

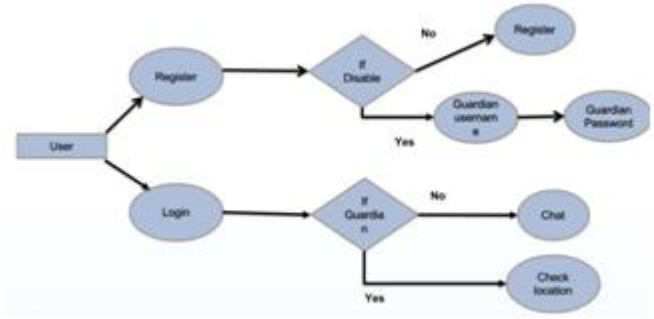
transforms the data and creates, output-data-flows which go to other processes or external entities or files. Data inputs.

1. **Level 0**



DFD Level 0 is also called a Context Diagram. It's a basic overview of the whole system or process being analyzed or modeled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities.

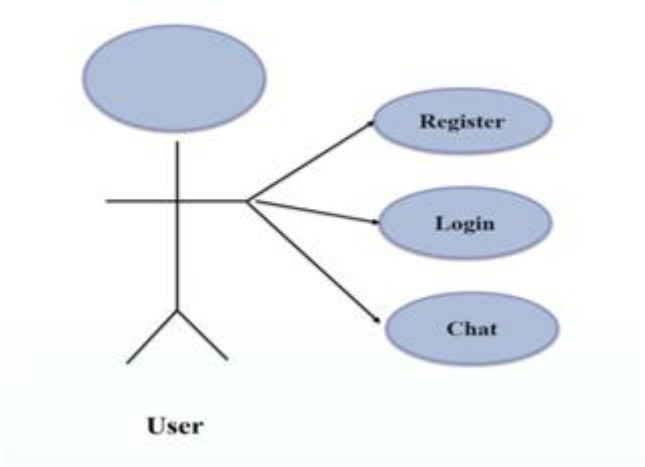
2. **Level** 1



DFD Level 1 provides a more detailed breakout of pieces of the Context Level Diagram. You will highlight the main functions carried out by the system, as you break down the high-level process of the Context Diagram into its sub processes.

Use Case diagram

A use case diagram is used to represent the dynamic behavior of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles a system.

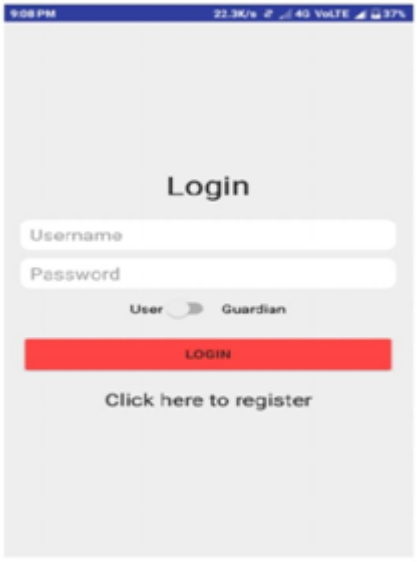


V. FUTURE EXTENSION

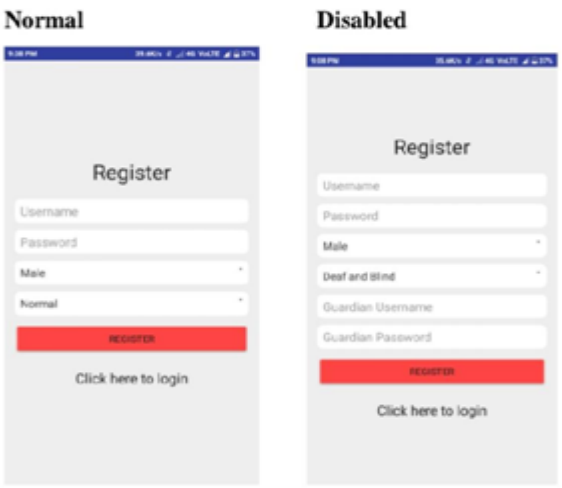
There are many places to improve the project such as profile section ,we can add contents like profile picture ,mobile number etc. in a profile menu. We have to change the username and password login into mobile number authentication otp so, the user can easily use the app like any other chatting application. We are going to change the guardian map section into the profile settings, and we are to planning to add a setting option which help the users to change or edit their profile in settings.

IMPLEMENTATION

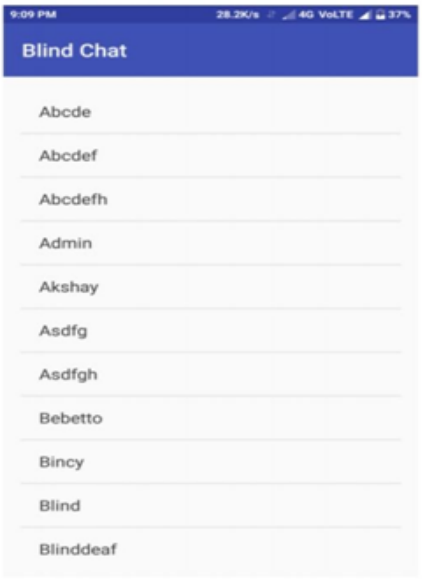
1. *Login*



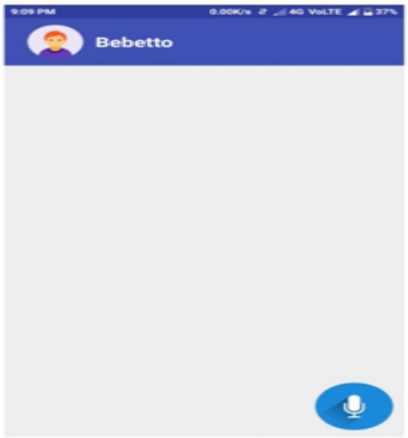
2. *Registration form*



3. *Chat*



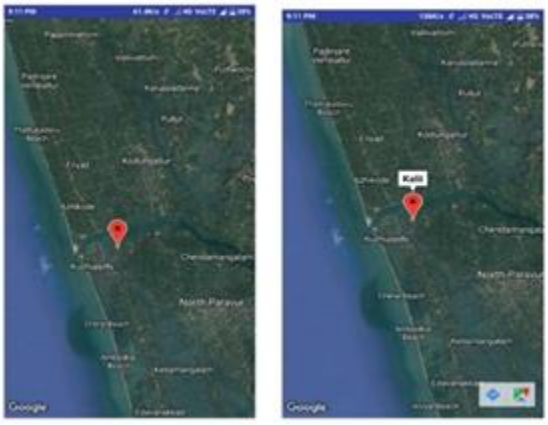
4. *Blind chat window*

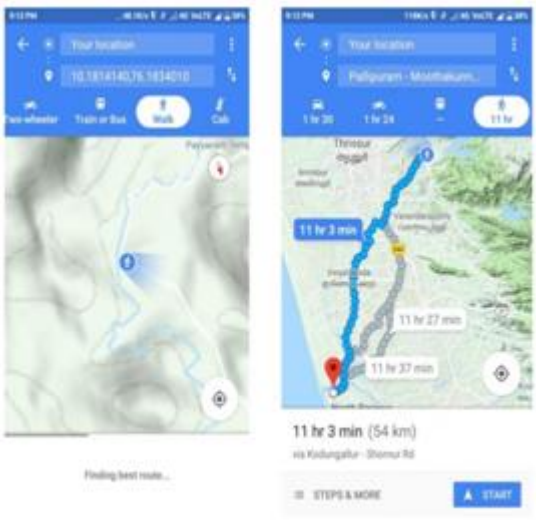


5.Blind and deaf window

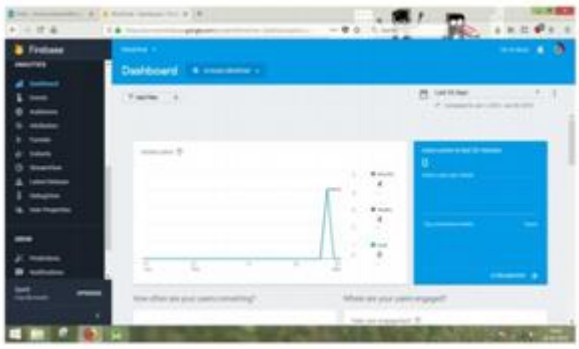
6. Sight board

7.Guardian map





8.Firebase



VII. CONCLUSION

This project has successfully achieved its aims and objectives. A android application which help the disabled people to communicate each other and to protect them from being lost. The purpose of developing insight messenger is to give internet freedom to all human beings, to communicate each other. Just like our caption , chat without any boundaries.

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