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An Android Assistant for Alzheimer's Disease

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***Abstract*: Android imagining efforts works an important part in the field of medical studies. In response to the many of health related issues android is developing most of its beneficial and effective applications. Alzheimer disease is neurodegenerative of brain cell. The patient requires an assistant for daily routine, so android is providing an application as an "assistant" for such patients. And maintain information in local and remote storage.**

***Keywords*: Alzheimer's Disease(AD), Cognitive Disabilities (CD), Neurodegenerative Cells, Magnetic Resonance Imaging (MRI).**

1. Introduction

Alzheimer's Disease(AD) is fifth leading disease which is cause of death. millions of people all over world suffering from this Alzheimer's disease. This disease effect aged people and in it's simplest form this disease is called as "short term memory loss" or "dementia". This disease initially proceeds slower and get worse with the time. It is observed that one in eighty people will be effected by 2050 all over the world. The disease was titled by German pathologist Alois Alzheimer. The early stage of disease have symptoms like difficulty with abstract thinking, problem in speaking, reading and understanding, misplacing important things, problem with performing routine, disorientation of time etc. Medical research plays an important role in short term memory loss. Some commonly used medical images is to identify Alzheimer's disease at an early stage involves magnetic resonance imaging, cerebral-spinal fluid (CSF).

In MRI radio waves are used and also a magnetic field to observe tissues and organs in the human body. After one diagnosed with the Alzheimer disease it will be essential to provide a full time assistant. To take care of the one who is suffering from dementia (Short term memory loss). This will help them to lead life independently.

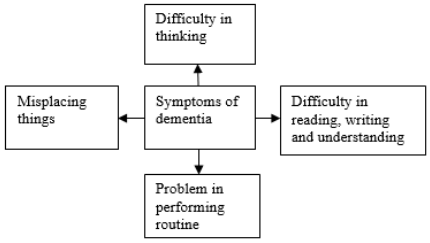

Fig. 1. Symptoms of AD

2. Method

A. *Magnetic resonance imaging (MRI)*

Structural imaging provides information about the shape, position or volume of the brain tissue. Structural technique includes magnetic resonance image (MRI). MRI uses radio waves under strong magnetic field to produce detailed images of brain cell. MRI scans are used primarily to rule out other conditions. While they may show brain shrinkage, information does not currently add significant value to making a diagnosis.

An application is proposed for personal information system powered by contact details, where the main AD patient's interaction is performed by smart phone, which is carried out in cloud.

This is the era when people are believed to their smart phones and smart devices powered by Android. There are various applications out there that offer features like data sync, data sharing, backup and storage facilities etc. If you develop an application that is standalone App that functions and stores data only on one device, it might not be a completely feasible solution. There is need of back end platform where data can be stored and easily accessed irrespective of user's location. So the data of this "Android assistant for Alzheimer's disease" will store in fire base.

We divide Applications in different categories:

The first application is back up memory which is an Android application that works via internet connectivity. It allows initially raises the contacts to the application itself, to upload details of people who are known to the patient, and as soon as such a person approaches patient, it shows a message with increased count as the number of people added. The second application is Tweri, which is an Android application for relatives of people with Alzheimer's disease. This application provides tracking facility for Alzheimer's patient. It uses GPS technology to allow care giver to monitor the patient all the time. The third application is test memory game. This application aims at helping those with Alzheimer's to improve their memory. It does so through offering exercises.

3. Working of Application

Fig. 2. System Interface and the Main System Page

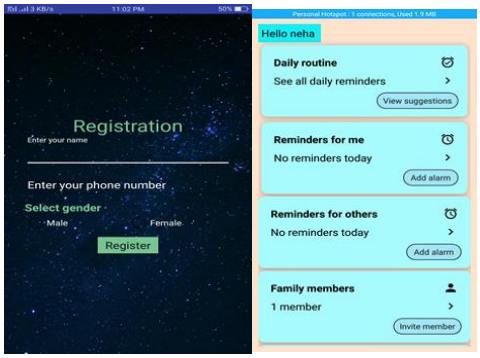

Fig. 3. Registration and daily routine

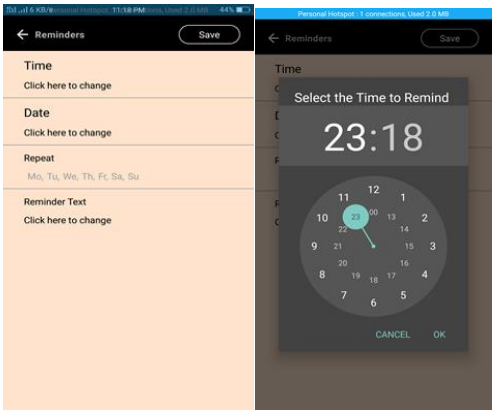

Fig. 4. Reminder page

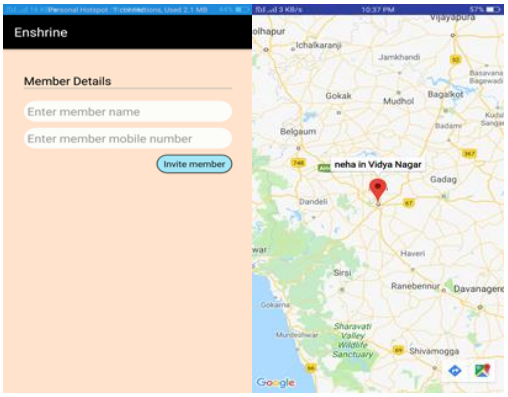

Fig. 5. Family member and location tracking page

4. Conclusion

The mobile application in health care sector.

- Therefore, the main aim of this study is to help Alzheimer's patients. In addition, Alzheimer's patients also suffer from memory loss, in the beginning, the problem is simple which is about forget some recent events, such as forgetting the people have met or what did that day, but the problem evolve with time.
- Reminder application prototype system that includes a lot of features which helping them to remember easily and contribute for keeping their health in the long run.
- Finally, we hope that this work up to the target groups and helps them to overcome their problem with forgetting and to live their lives better.
- Looking ahead, for deploying the application as widely as possible and make it available to everyone on the Google Play store and also submit it to the concerned authority of the target groups in order to benefit from it.

References

[1] Zaid A. Habash, Wan Hussain Wan Ishak, and Mohd. Hasbullah Omar, "Android-based application to assist doctor with Alzheimer patient," International Conference on Computing and Informatics, August 2013.