Dementia Care Application

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Abstract - *Dementia is any decline in cognition that's significant enough to intrude with independent, diurnal functioning. madness is stylish characterized as a pattern rather than as one particular complaint. The causes of madness are myriad and include primary neurologic, neuropsychiatric, and medical conditions. It's common for multiple conditions to contribute to any one case's madness pattern. Neurodegenerative mania, like Alzheimer complaint and madness with Lewy bodies, are most common in the senior, while traumatic brain injury and brain excrescences are common causes in youngish grown-ups. While the recent decade has seen significant advancements in molecular neuroimaging, in understanding clinico-pathologic correlation, and in the development of new biomarkers, clinicians still await complaint- modifying curatives for neurodegenerative mania. Until also, clinicians from varied disciplines and medical specialties are well poised to palliate suffering, aggressively treat contributing conditions, employ specifics to ameliorate cognitive, neuropsychiatric, and motor symptoms, promote substantiation- grounded brain-healthy actions, and ameliorate overall quality of life for cases and families*

Key Words: **Dementia, Symptoms, Patients.**

1.INTRODUCTION

Dementia is a disorder that manifests with a set of accompanying symptoms, usually when the brain is damaged by injury or disease. Symptoms involve a progressive disorder in memory, thinking, and behavior that negatively affects a person's ability to function and carry out daily activities. In addition to memory problems and thought disturbances, the most common symptoms include emotional problems, language difficulties, and decreased motivation. Symptoms can be described as occurring in a multi-stage sequence. Consciousness is not affected. Dementia ultimately has a significant effect on individuals, caregivers, and social relationships in general.

1.1 Overview

Dementia patients will profit from an Smartphone app. The app's feature set corresponds to what patients need on a daily basis. Helping Alzheimer's sufferers with daily tasks would be a major challenge. Alzheimer care focuses on all of these issues and helps to integrate all functions into a single app in the following section of this text, the list of features is explained.

1.2 Problem Statement

Dementia patients will profit from an Smartphone app. The Dementia is a disorder which manifests as a set of related symptoms, which usually surfaces when the brain is damaged by injury or disease. The symptoms involve progressive impairments in memory, thinking, and behavior, which negatively affect a person's ability to function and carryout everyday activities. Major problem with Alzheimer cases would be to help them with diurnal chores. Alzheimer care targets all similar problem and helps to get all features under one app. The being system has operations which are confined only to ultra expensive druggies and high- end Smartphone The operations had only features of storing particular information in a textbook format and could have only limited information .Alzheimer's disease is a degenerative kind of dementia that affects memory and thinking abilities as well as the capacity to perform even the simplest tasks. It affects 10% of people worldwide who are 65 years or older .The patient's long-term memory is still functional in the early stages, although recent information like time and day may be forgotten. The disease also has a strong impact on the family members who must endure heartbreaking emotional experiences as a result of seeing an elderly parent or spouse in such a state. We consequently made the decision to develop an app to assist careers and family members in keeping the patient mentally active and thereby assisting with brain workouts .Damage to your brain results in different symptoms, depending on the area of your brain affected. Some dementias aren't reversible and will worsen over time. Other dementias are due to other medical conditions that also affect your brain. Another group of health issues can result in dementia-like symptoms. Many of these condition treatable, and the dementia symptoms are reversible**.**

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2. Literature Survey

YEAR	AUTHOR	TITLE	METHOD	DATASETS	DRAWBACK
2021	Tuck Woon, et.al	Dementia care apps for people with dementia and informal caregivers: a systematic review protocol	Critical Appraisal Skills Programme (CASP) checklists will be used to assess the study quality.	Sampled from Extensive databases	Knowledge gap in older adults were not explored in the review
2022	Angel H Wang, et.al	Beyond instrumental support: Mobile application use by family caregivers of persons living with dementia	Qualitative description approach	involving the ages, location of the caregiver, relation of the patient to the caregiver.	The study needs to explore persons living with dementia - needs, preferences could inform developers on what types of apps are suitable
2022	D David, SY Lin, et.al	Aliviado Mobile App for Hospice Providers: A Usability Study	Hospice Advanced Dementia Symptom Management.	Data was collected from 86 respondents filling out the questionnaire	Training to be given for app users & no offline access
2021	P Yang, G Bi, et.al	Multimodal wearable intelligence for dementia care in healthcare 4.0: A survey	Tri-phase model .	Data was collected from 100 respondents filling based on private research	Mostly focus on the prospective memory tasks but fail to cover retrospective memory
2019	Lefteris Koumakis, et.al	Dementia care frameworks and assistive technologies for their implementation: A Review	assistive technologies for dementia.	EU research projects related to Dementia	No proper model being proposed
2019	Ridwan Alam, et.al	Multiple-Instance Learning for Sparse Behavior Modeling from Wearables: Toward Dementia-Related Agitation Prediction	smart watch inertial sensors.	The data from 10 residential deployments.	Mostly focus on the agitation phenomenon (continuous wrist motion monitoring), but doesn't concentrate on day-to-day activities

3. PROPOSED SYSTEM

Proposed system consists of a native mobile application for android as well as iOS based smartphones. Our idea is to develop an application that helps them in their daily routine tasks, focusing on the problems they face in every stage, take Emergency Details, Set Food, Water, and Custom Reminders, emergency Message alerts and Quick dial module along with Personal information section Navigation to home using Google Maps
Advantages:

• Quick dial module
• Set Food, Water, and Custom Reminders
• Emergency Message alerts
• Personal information section
• Navigation to Home using Google Maps

4. SYSTEM DESIGN
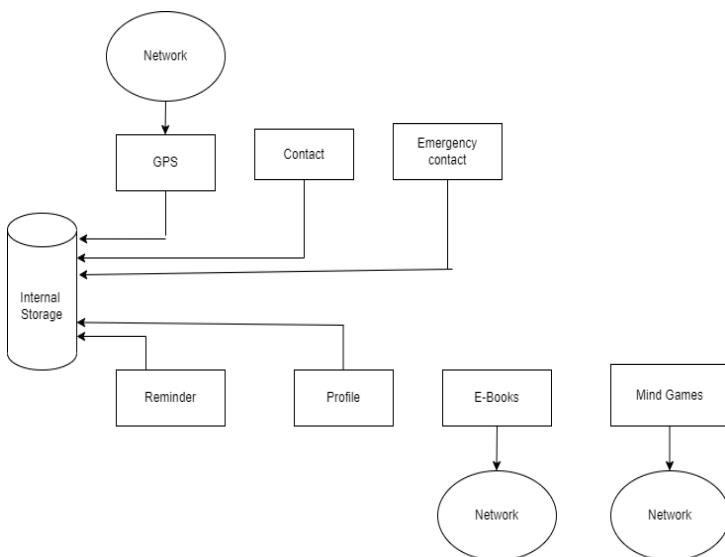
Fig -1: Low- Level System Design

Some of the modules will be connected via network. All the data will be stored to Internal Storage of the respective devices. User can use location in order to find there way to home. User can set daily tasks and set reminder to perform day to day activities efficiently without the help of caretakers.

5.Implementation

Contact:- It is used to display contacts, which is in there personal contact.

Reminder:- Patients can easily add reminders of there day to day chores.

To Do:- They can add task(which is not reminder) of there day to day chores.

Mind game:- User can play games which will help to pass the time and improve their memory.

Books:- If some user have the habit of reading, they can easily read any book.

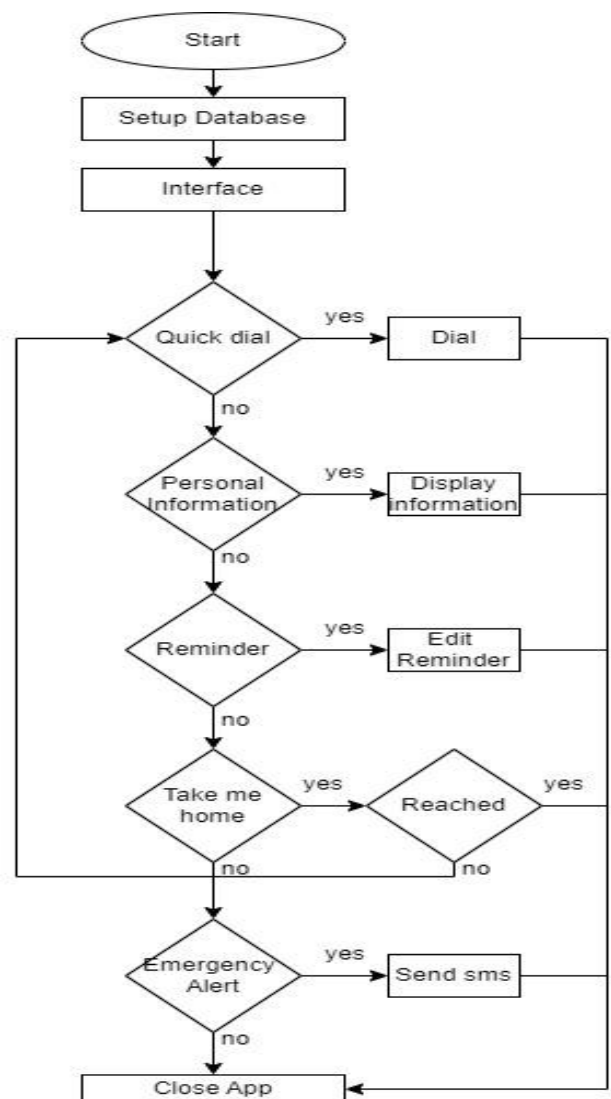GPS:- It is used to used show the direction to any place.

6.FLOWCHART

Fig -2: Methodology Flowchart

7.EXPERIMENTAL RESULTS

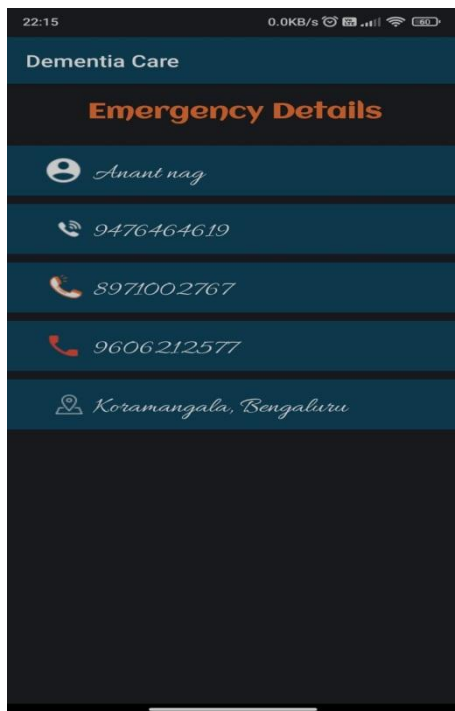**Fig -3:** Dementia Care App's Home Screen

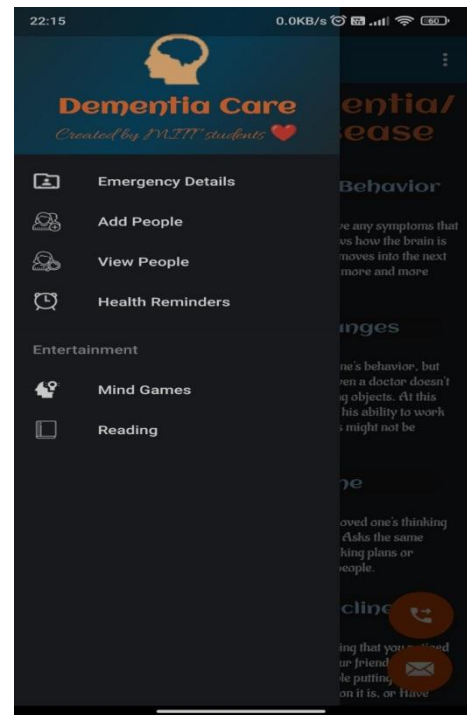**Fig -4:** Emergency Details Section

Fig -5: Navigation Pane
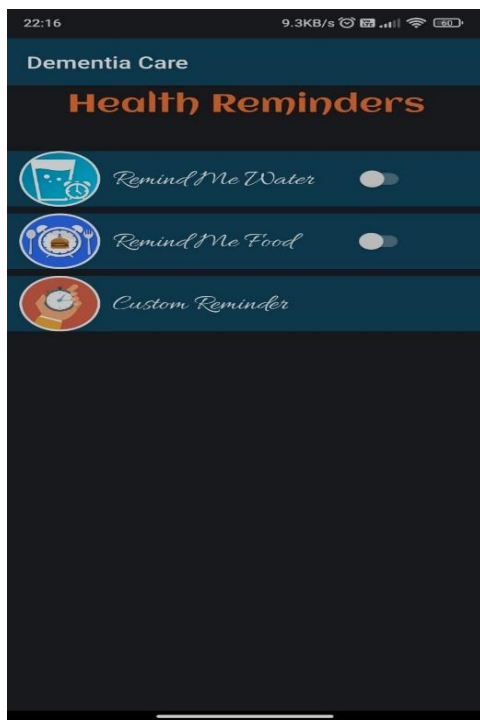

Fig -6: Settings Section
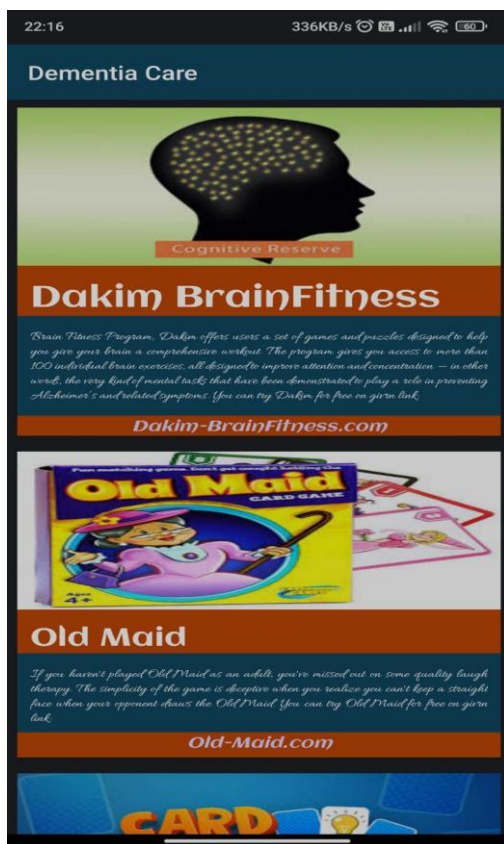
Fig -7: Reminders Section

Fig -8: Brain Games Section

8. CONCLUSIONS

Dementia is a degenerative ailment that ultimately affects a person's capability to live singly. There are numerous types of dementia, although Alzheimer's disease is the most common type. Delirium and depression can be confused with dementia and a thorough evaluation should rule out other causes of cognitive loss previous to making a determination of dementia. Although people with dementia frequently parade actions that are challenging for family and professional caregivers to manage, the actions are caused by damage to the brain and aren't purposeful. Challenging actions can be caused by unmet requirements and may be a means of communication. By precisely observing what comes directly ahead and after a geste , the caregiver may be suitable to determine the underpinning need and learn how to palliate the grueling geste.

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