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Department of Electronics and Communication Engineering



HX8001 - PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

PERSONAL ASSISTANT FOR SENIORS WHO ARE SELF RELIANT

Domain of the Project : INTERNET OF THINGS

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Objectives

- Dispense of medicines from pill box at scheduled time.
- Medical alerts to care taker and retailer
- Online report generation of medicine
- Real-time health statistics monitoring of medicines
- Configuration data is send through mobile app

Abstract

- It is designed to assist the patient who forgets to take medicine. The proposed system consists of an IoT enabled device and an android application. Patients will no longer have to worry about daily medication. The application will send a notification when it's time to take medicine.
- The mobile application is used for keeping the record in medicine details and reminding the schedule of medicine. We have used the IoT enabled Arduino device for monitoring the whole system. The device can sense whether a patient has taken medicine or not with the help of the infrared (IR) sensor. We have tried to develop a system which will help patients to manage their health care properly.

Introduction

- Maintaining daily medication become very difficult for old people. There are many people in a family who need constant help like elderly people. But it is not always possible for us to remind them of their medicine's dosages every time. For this purpose, there needs to be some facility for us which monitoring patient and take care.
- Today in medical services frameworks, the usage of cell phones is turning into an expanding number of values. IoT can be a powerful and effective paradigm to store data collected by sensors devices to the cloud.
- In our project, the IoT enabled device will control the overall monitoring system. And developed an android application which help patients by reminding medicine in take time and so on.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
CIOT based Smart Pill Carafe in Health Care	Harihara Gopalan Narayanan & 2020	Jornal of Physics Conference Series	This eliminates the regular monitoring of glucose level manually by intimating the caretaker through sending them alerts .The proposed system will avoid the major problems of the patient
IOT Based Smart Medicine Dispenser to Control Medication Intake	Miguel J. Hornos & 2020	IoT Based Medicine Dispenser	It presented a smart medicine dispenser that helps older people or people with cognitive problem to take their medicine doses on schedule.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Helping elders become more self-reliant	Johns Hopkins &2021	Asian journal of Convergence in Technology	At a relatively small cost, elders could be made more self-reliant and healthy and also less depressed, suggest the preliminary findings of a home-intervention pilot.
A Self-Reliant Umbrella: Defining Successful Aging Among the Old-Old (80+) in Shanghai	Lin Chen,MinZhi Ye,Eva Kahana & 2019	Journal of Applied Gerontology	This study offers new understanding of the dynamic and nuanced ways that the old-old in urban China age successfully and of their valiant efforts to maintain self-reliance.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Smart Homes and Quality of Life for the Elderly: Perspective of Competing Models	Debajyoti Pal & 2018	Institute of Electrical and Electronics Engineers	This paper provides the initial groundwork to explore the process of adopting smart home services by the elderly with potential future research areas.
Virtual Agents as Daily Assistants for Elderly or Cognitively Impaired People	Marcel Kramer & 2019	Institute of Electrical and Electronics Engineers	Actual interaction studies with a prototype demonstrate the feasibility of spoken-language interaction and reveal strategies to mitigate understanding problems.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
IOT Based Portable Medicak Kit	Kartik Arora & 2019	IOT Based Portabl e Medicak Kit	The pill dispenser provides a means of regular medication at predefined time intervals. The dispenser makes sure that the user is alerted every time he/she needs to take a dose, this way the user need not worry about setting reminders for his daily medicine schedule.
IOT Based Smart Pill Development For Medical Field Advanced	Kishore Kumar V & 2021	IOT Based Smart Pill Development For Medical Field Advanced	In the future there is possibility for the development of micro electronic pill with camera which is used to view the internal structure which is based on imaging technology.

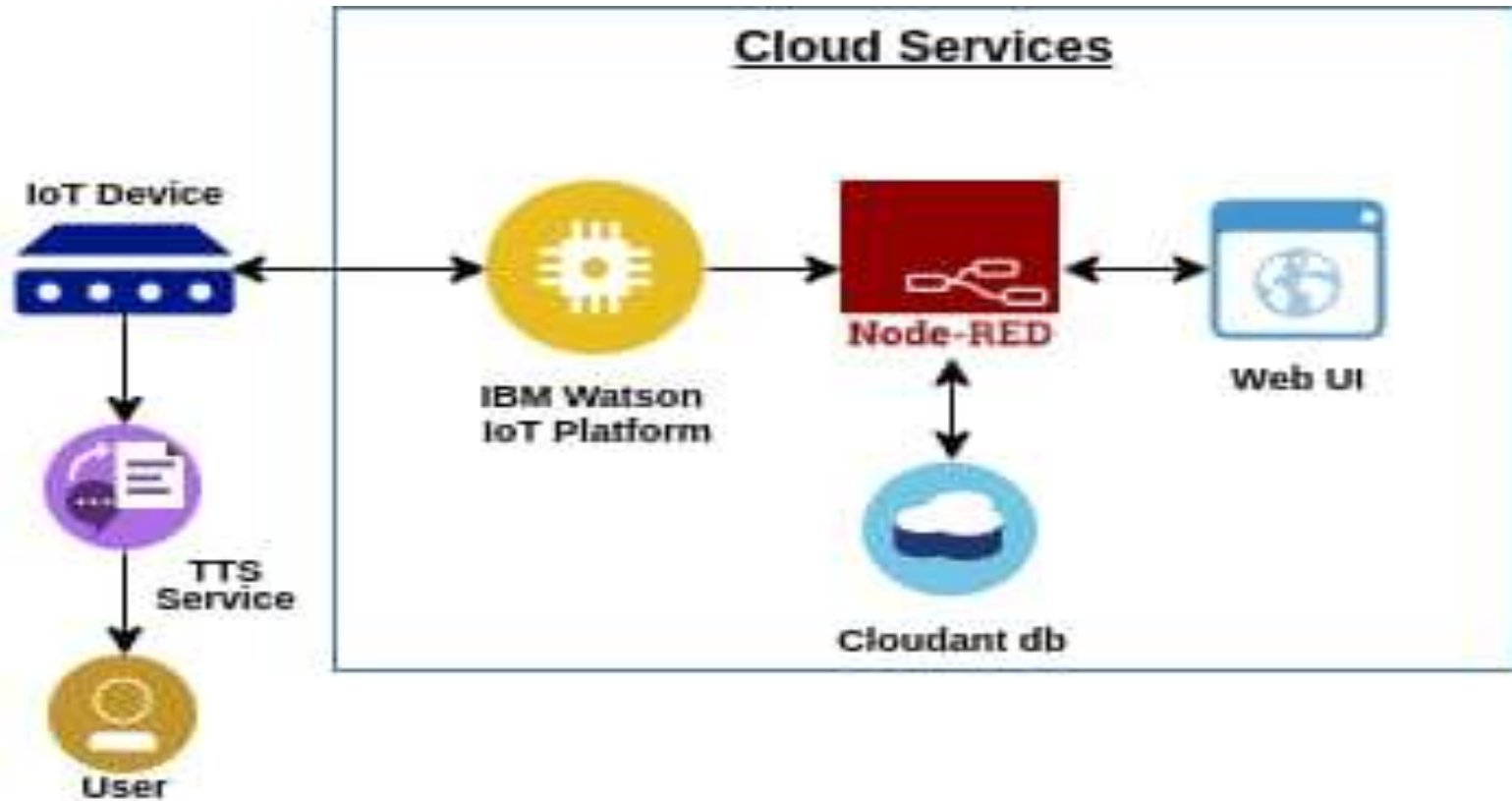
Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
IOT Based Applicatio ns in Healthcare De vices	Kunal Pal & 2020	IOT Based Applic ations in Healthcare Devices	By employing these concepts, the IoT-technology has helped healthcare professionals to monitor and diagnose several health issues, measure many health parameters, and provide diagnostic facilities at remote locations.
Flexible Compartments IOT driven smart pill box	Lipsa Dash & 2018	Flexible Com partment IOT driven smart pill box	The disabled patients and people who cannot afford for a caretaker also require aid. This device aims at dispensing pills according to the patient's health requirements at the right time and dosage

Problem Identification

- Patients may often fail to comply with their medications whether it was from forgetting to take the medicine, from taking medicine at the wrong time may leads to severe problems sometimes it may leads to fatal.
- To avoid this, By using their Smart Phones they can get reminder about their medicine on time.

Block Diagram



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Questions & Discussion

THANK YOU