

Personal Assistance for Seniors Who Are Self-Reliant

Team Members:

- Kaiser A
- Harish L
- Rashmi S
- Gokul K S

Abstract:

Sometimes elderly people forget to take their medicine at the correct time. They also forget which medicine they should take at that time. It is also difficult for doctors/caretakers to monitor the patients around the clock. To avoid this problem, a reminder system has been proposed. An app is built for the user (caretaker) which enables him to set the desired time and medicine. These details will be stored in the IBM Cloudant DB. If the medicine time arrives the web application will send the medicine name to the IoT (Internet of Things) Device through the IBM IoT platform. The device will receive the medicine name and notify the user with voice commands.

Keywords: *IoT, Web Application, Medicine Intake, IBM Cloudant.*

Literature Survey:

S. No.	Link	Publication	Paper	Author	Inference
1	MEDication reminder APPs to improve medication adherence in Coronary Heart Disease (MedApp-CHD) Study: a randomised controlled trial protocol - PubMed (nih.gov)	BMJ, October 10, 2017.	MEDication reminder APPs to improve medication adherence in coronary heart disease (MedApp-CHD) Study: a randomised controlled trial protocol	Karla Santo, Clara K Chow, Aravinda Thiagalingam, Kris Rogers, John Chalmers, Julie Redfern	Medication remainder App through randomization. Randomization will be performed using a central pass-word-protected web-based computerized randomization program with a 1:1:1 allocation ratio. There will be no stratification for the randomization procedure, and group allocation will be concealed from the study personnel. Due to the nature of the intervention, it is not possible to blind participants to group allocation.
2	ArduMed - Smart Medicine Reminder for Old People (ijser.org)	International Journal of Scientific & Engineering Research, Volume 7, Issue 5, May-2016	ArduMed - Smart Medicine Reminder for Old People	Mayuresh Waykole, Vatsalya Prakash, Himanshu Singh, Nalini N	The remainder is set in two ways: using the web application, that has been synchronized with their calendar, assigned color to match their medicine, and to implement that in hardware part they have used different colored LEDs (Light Emitting Diodes)
3	Internet of Things (IoT) Based Smart Health Care Medical Box for Elderly People IEEE Conference Publication IEEE Xplore	2020 International Conference for Emerging Technology (INCET) Belgaun, India Jun 5-7, 2020	Internet of Things (IoT) Based Smart Health Care Medical Box for Elderly People	Obaidulla-Al-Mahmud ¹ , Md. Kausar Khan ² , Rajdeep Roy ³ , and Fakir Mashuque Alamgir ^{4,1,2,3,4} East West University, Dhaka, Bangladesh fma@ewubd.edu	The information about the doctor and patient is stored on a server, where the doctor can monitor. This system sends an email to the patient if he/ she misses out on an appointment or fails to take his/her medicine.
4	Design & Implementation of an Automated Reminder Medicine Box for Old People and Hospital IEEE Conference Publication IEEE Xplore	2018 2 nd Int. Conf. On Innovations in Science, Engineering and Technology (ICISET) 27 – 28 October, Chittagong, Bangladesh	Design & Implementation of an Automated Reminder Medicine Box for Old People and Hospital	Mohammed Abdul Kade, Mohammad Nayim Uddin, Asif Mohammad Arfi, Naemul Islam, Md. Anisuzzaman	The device has a box, with compartments, the attendants can manually set the time and store them in SD card. When the time is matched with the set time, the device plays an alarm.

5	Medicine management and medicine taking assistance system for supporting elderly care at home	2010 2 nd International Symposium on Aware Computing	Medicine management and medicine taking assistance system for supporting elderly care at home	Yui Yamamoto, Runhe Huang, Jianhua Ma	Three main functionalities: 1. RFID based medicine management 2. RFID and wireless sensors-based medicine taking monitoring 3. Situation awareness and decision-making based approach for medicine taking assistance.
---	---	---	---	---------------------------------------	--

References:

- [1] Santo, K., Chow, C. K., Thiagalingam, A., Rogers, K., Chalmers, J., & Redfern, J. (2017). MEDication reminder APPs to improve medication Adherence in Coronary Heart Disease (MedApp-CHD) Study: a randomised controlled trial protocol. *BMJ open*, 7(10), e017540.
- [2] Waykole, M., Prakash, V., & Nalini, N. H. S. (2016). Ardumed-smart medicine reminder for old people. *Int J Sci Eng Res*, 7, 650-654.
- [3] Al-Mahmud, O., Khan, K., Roy, R., & Alamgir, F. M. (2020, June). Internet of things (IoT) based smart health care medical box for elderly people. In 2020 International Conference for Emerging Technology (INCET) (pp. 1-6). IEEE.
- [4] Kader, M. A., Uddin, M. N., Arfi, A. M., Islam, N., & Anisuzzaman, M. (2018, October). Design & implementation of an automated reminder medicine box for old people and hospitals. In 2018 International conference on innovations in science, engineering, and technology (ICISSET) (pp. 390-394). IEEE.
- [5] Yamamoto, Y., Huang, R., & Ma, J. (2010, November). Medicine management and medicine taking assistance system for supporting elderly care at home. In 2010 2nd International Symposium on Aware Computing (pp. 31-37). IEEE.