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Automatic Food and Medicine Dispenser System

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ABSTRACT: Medication and food must be given to the elderly on time. Elderly people must follow their medical regimens because they are more likely to forget to take their pills on time. This device also notifies the nurse of the patient's status and monitors their blood pressure and temperature.

KEYWORDS: Pill dispenser, ARDUINOMEGA, temperature sensor, Pulse sensor ARDUINOIDE.

I. INTRODUCTION

An automatic food and medicine dispenser system is an electronic device that is designed to provide timely and accurate dispensing of food and medication to humans. The system uses sensors and programmable controls to automatically dispense food or medication at specified intervals, making it an ideal solution for people with medical conditions that require regular medication or specific dietary needs. The system can be set up with pre-programmed settings to dispense food or medication at specific times of the day, or it can be manually controlled through a user interface. The dispenser can give medicines, food and water accordingly, making it easier for people to manage their medication intake. Overall, automatic food and medicine dispenser systems offer convenience, accuracy, and peace of mind to those who require regular medication or have specific dietary needs. In this system we also design regular health condition monitoring system that monitors temperature and pulse rate using various sensors and report the condition of the patient to doctor. Temperature and pulse monitoring are essential aspects of healthcare, especially in critical care settings, where monitoring vital signs is essential for patient management. Temperature and pulse monitoring devices are used to measure and monitor the temperature and pulse rate of patients. These devices come in various forms, including contact and non-contact thermometers, pulse oximeters, and other wearable devices. Temperature monitoring is critical in the early detection of infection or fever, which can be a sign of underlying health conditions. The most commonly used temperature monitoring devices are contact thermometers, which are placed under the tongue or armpit, or non-contact thermometers, which use infrared technology to measure the temperature without making direct contact with the skin. Pulse monitoring, on the other hand, is the measurement of the heart rate. The most commonly used device for pulse monitoring is a pulse oximeter, which uses a non-invasive method to measure the oxygen saturation level in the blood and the pulse rate. These devices are especially useful for patients with respiratory problems or those undergoing anaesthesia. Overall, temperature and pulse monitoring are essential aspects of patient care that help healthcare providers in the diagnosis, treatment, and management of various health conditions.

II. METHODOLOGY

After the system is started, it periodically monitors the patient's health condition. If the patient's health that is temperature and pulse rate is normal, it sends the message to the nurse. First it initiates the dispensing process. The patient must choose the appropriate process accordingly the dispensing process begins. This system dispenses tablet, food and water according to the routine. The current process which is going on with the patient will be displayed on LCD. After the completion of dispensing process, the success message will be sent to the nurse. If there is any error in the dispensing system error message will be sent

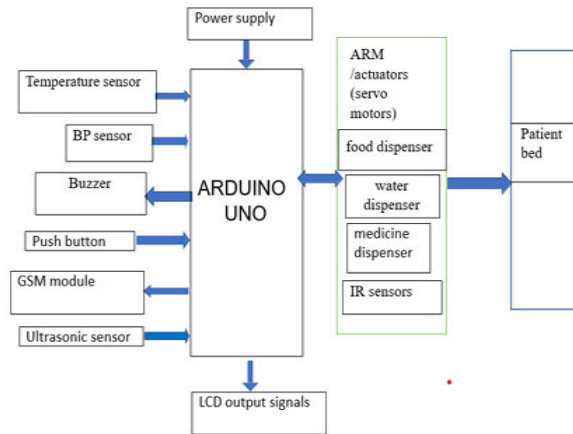


Figure.1.Block Diagram

III. RESULTS AND DISCUSSION



Figure 2. System checks the health condition



Figure 3. Patient has to select the process



Figure 4.Arm Moving towards patient



Figure 5. Dispensing process

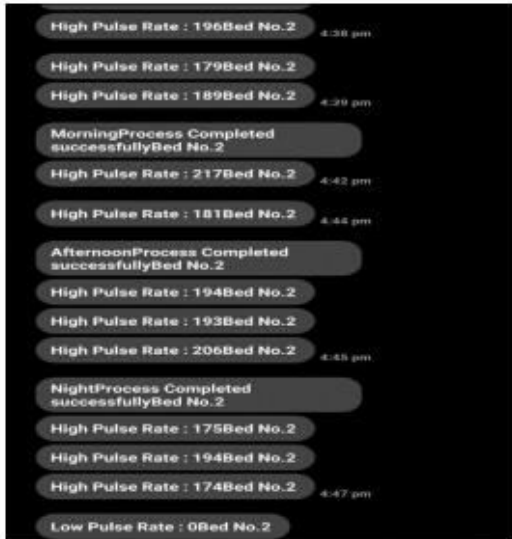


Figure 6. Successful message

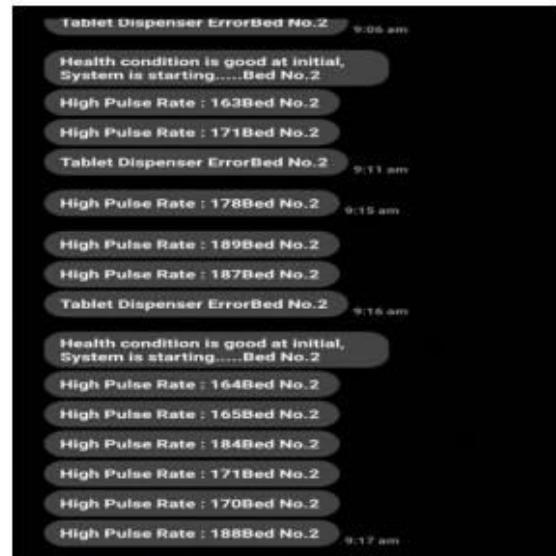


Figure 7. error message

IV. CONCLUSION

In conclusion, an Automatic Food and medicine dispenser system can provide several benefits for patients, caregivers, and healthcare professionals. It can help improve medication adherence and reduce the risk of complications, hospitalization rates, and overall healthcare costs. The system can be particularly useful for the elderly, people with chronic illnesses, and those with mental health conditions who may have difficulty managing their medications and health conditions on their own. Additionally, the system can provide valuable support for caregivers and healthcare professionals who are responsible for managing multiple patients. This system monitors the Temperature and pulse rate of patient and report the same to database. Overall, the automatic medicine dispenser with timely reminder and health condition monitoring system is an innovative and effective solution that can help improve the quality of life for patients and reduce healthcare costs in the long run.

REFERENCES

1. Automated Pill Dispenser, Mr. Christopher Chariah, Vaughn College of Aeronautics and Technology, ASEE's 123rd annual, conference and exposition, New Orleans, LA, JUNE 26- 29 2021.
2. Swissair Anton, Ali Ab-do, Suleiman Al- Haman, Abdallah Kassem, Mustache Hamad and Chady El-Mou Cary, "Smart Medicine Dispenser (SMD)", 2018 IEEE 4th Middle East Conference on Biomedical Engineering (MECBME), pp. 20-23, 2020.
3. Anuradha J P, Nitin awasthi, "Automatic medicine dispenser for hospitals and old age homes", International research journal of engineering and technology (IRJET), Volume no.5, Issue no.4, pp 4955-4958, April 2018.
4. McCall C, Maynes B, Zou CC and Zhang NJ, "RMAIS:RFID-based medication Adherence Intelligence System", Conference Proceedings IEEE Engineering Medicine Biological Society, Volume 3768, Issue 71, 2018.
5. PawelStelmach, LukaszFalas, Grzegorz Kasiukiewicz, PaulinaKwasnicka, PawelSWi, "IoT Modelling and Runtime Suite for eHealth" 2016 IEEE 18th International Conference on e-Health Networking, Applications and Services (Healthcom), 2016, pp.1-5.
6. [6] A. V. Dhukaram and C. Baber, "Elderly Cardiac Patients' Medication Management: Patient Day-to-Day Needs and Review of Medication Management System," 2013 IEEE International Conference on Healthcare Informatics, pp. 107-114, 2013.
7. [7] S.O. Popescu, G. Budura, A.S. Gontean, "Review of PSK and QAM – Digital Modulation Techniques on FPGA", International Joint Conference on Computational Cybernetics and Technical Informatics (ICCC-CONTI), Romania, 2010, pp.327-332.
8. Mei-Yeing Wang, "A Mobile Phone Based Medicine In-take Reminder and Monitor", 9th IEEE International



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Conference, June 2009.

10. Thai, P. H., C. S. Shah, and J. W. S. Lou, “Algorithms for scheduling multiple interacting medications,” Institute of Information Science, Academia Sinica, Taiwan, “Smart Medication Dispenser: “Design, Architecture and implementation”, IEEE journal, Vol-5, March-2011.
11. Liu JWS, Shah CS, Thai PH, Yeh HC, Hsiu PC, Yu CY, Chang WH, “End-User Support for Error Free Medication Process,” Proceedings of High-Confidence Medication Device Software and Systems, pp. 34 – 45, June 2007.



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