

Ideation Phase

Ideation & Problem Statement

Date	14 September 2022
Team ID	PNT2022TMID21568
Project Name	Personal Assistance for Seniors Who Are Self-Reliant
Maximum Marks	4 Marks

1. Idea Generation:

Though the health care society is slow adopting IoT (Internet of Things) than other fields, IoT in the field of medicine is destined to keep the people safe and healthy where the main purpose is to decrease the cost of health care in the coming years. A smart IoT based healthcare system has been proposed here, which contains an intelligence medicine box for elderly people. Sometimes elderly people forget to take their medicine at the correct time. They also forget which medicine He / She should take at that particular time, and it is difficult for doctors/caretakers to monitor the patients around the clock. To avoid this problem, this medicine reminder system is developed.

2. Idea Selection:

The existing Smart Pill Box is based on the medicine bag concept to store pills, to remind and ensure timely intake of medicines. The system alerts if faulty medications are consumed. The compartment of the box to organize pills can be separately programmed by specifying pill quantity, intake time and refill if necessary. The entire system is managed by some mobile applications which gives connectivity between doctors, patients and pharmacies. This system is connected along IoT, to regularly monitor patients' health details and to integrate it with server for efficient record keeping and treating.

The existing system can be upgraded to serve tonic type of medicines too by designing its outlet and considering the weight factor of the compartments to measure volume. The system can also be expanded to consider the time of foods taken and to serve the medicines at the constant time gap from then. The devices like smart watch, smart dress (to check body posture and movement) can be connected to the system and doctors with the help of IoT technology, which can help the seniors to get continuous assessment and precautionary treatment during the symptoms of emergency situation like cardiac arrest.

The application of the system can be made more functional and interactive in ways like ordering and billing of medicines, booking appointments with the doctor, connecting with caretakers. 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 Device through the IBM IoT platform. The device will receive the medicine name and notify the user with voice commands.