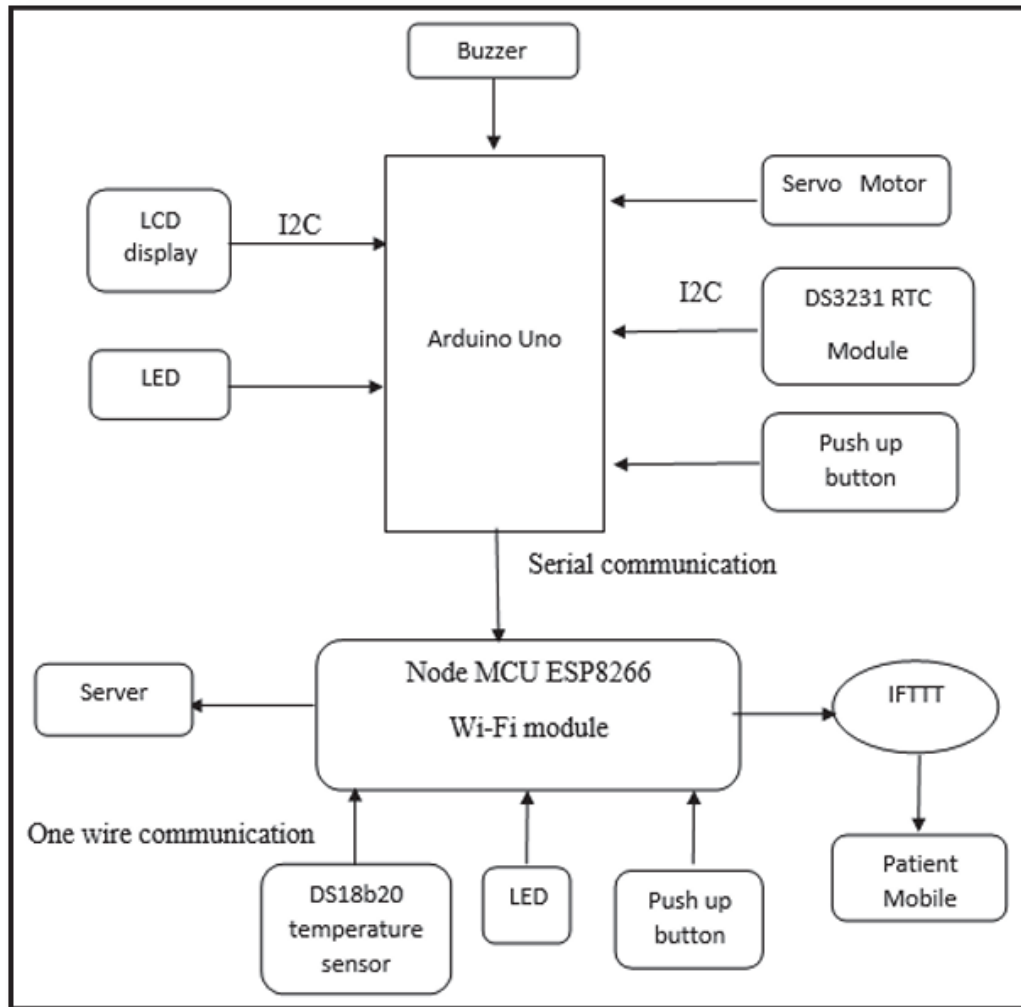


## PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT

### IDEATION PHASE

#### Idea Implementation:



As shown in Flowchart the smart medicine box will help a patient to remind him/her about his/her medication when it is time to take. In the morning the box will remind him by making sound and also by sending an alarm. If he forgets the actual time of taking medicine and goes to take medicine at any time the medicine box will not open as a servo motor will make the box locked. While it's the right time to take the medicine then the box will make sound and will give notification until the user takes medicine or open the drawer. Also, if the user is outside of the home, then the medicine box will use the Wi-Fi module to send notification to the user's fixed email address. The system contains also a temperature sensor to measure the temperature of the user as temperature can be a vital element of the monitoring patient's health condition. The temperature and taking medicine data will be stored in a server which

can be accessed by both patient and doctor so that when it is time the doctor can review the medicine and can change if needed. Also, it will be helpful for doctors to keep updated about the patient's physical health condition.

- Arduino UNO and NodeMCU Wi-Fi module are the main two components of this project and connected with each other through serial communication.
- A real time clock is generated using the RTC module. The medication time or alarm tone is set in the code compiled for this project. If the generated real time clock matches the medication time, then, an alarm will be created, the Buzzer will ring and an email will be sent to patients mobile as notification, the LED light of that compartment will glow.
- Server and Homepage of the Website - A server has been created to store all kinds of information about doctor and patient, medication time data and body temperature data.

Elderly people who need regular monitoring of their medication will be benefited through this project. Server for storing medication time and other information, mail transferring protocol, temperature sensor for proper monitoring of patient body temperature has been integrated in this project.