

Project Design Phase-II
Solution Requirements (Functional)

Date	16 October 2022
Team ID	PNT2022TMID12805
Project Name	Personal Assistance For Seniors Who Are Self-Reliant

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR no	Functional requirement	Sub requirement
FR 1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR 2	User Confirmation	Confirmation via Email Confirmation via OTP
FR 3	User input	input as program of robot
FR 4	Processing of user input	Image acquisition, pre-processing, image segmentation
FR 5	Feature extraction of user image	Machine learning algorithms, image classification, data mapping
FR 6	Result of user input	Display the disease name and fertilizer lack for the issues

PROJECT FLOW:

Users can configure the medicine name, and time through a web application . All the medicine details will be stored in the IBM Cloudant DB. The web application will send the medicine name to the IoT device at the desired time. After getting the medicine name the device will speak out the medicine name using IBM text to speech Service to intimate the user to take the medicine.

To accomplish this, we have to complete all the activities and tasks listed below:

- Create and configure IBM Cloud Services
- Create IBM Watson IoT Platform
- Create a device & configure the IBM IoT Platform
- Create Node-RED service
- Create text to speech service
- Create a database in Cloudant DB to store medicine details
- Develop a web Application using Node-RED Service
- Develop a python script to subscribe to the IBM IoT platform & Generate voice alerts