PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT

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Chapter - 1

INTRODUCTION

Project overview

By analyzing the data, an internet of things (IoT) based reminder system has been developed. It is designed to assist the patient who forgets to take medicine. The system consists of an IoT enabled device with mobile application and web application. From both web application and mobile application get the data from user and store it in cloudant DB, those datas are stream in IBM watson IoT Platform, get those datas which stream in watson IoT platform and the Alarm remainder is done through simulation .

Purpose

1. Medication reminders serve as a good way to stay on track and uphold an appropriate schedule.

2. It is a strategy for engaging with patients and caregivers to create a complete and accurate medication list .

3. It is designed to assist the patient who forgets to take medicine,patients will no longer have to worry about daily medication.

4. The application will remaind when it's time to take medicine.

5. The mobile application is used for keeping the record in medicine details and reminding the schedule of medicine.
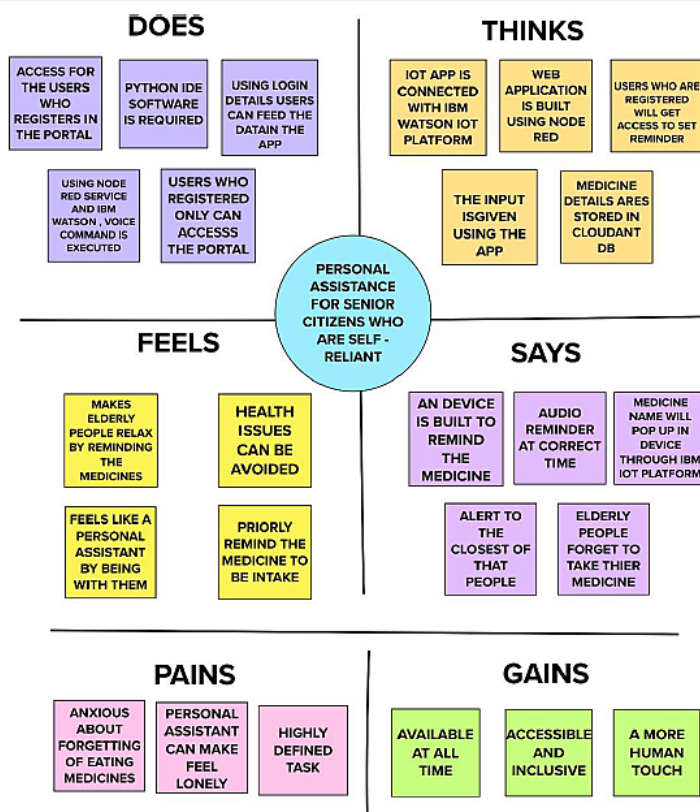
Chapter - 2

LITERATURE SURVEY

S.NO	Author	Title	Name of the Journal/ Conference	Volume/ Issue/Year	Merits/ Demerits
1	Constant Companion	A New Personal Assistant for Older Adults	RevIntellArtif. 2019;33:435–40	23September 2019	This purpose-built solution iscalled Constant Companion, a first-of- its-kind personal emergency and companion system that works hands-free with Amazon's Alexa. We invite you to experience how this voice-activated virtual assistant works. It's a revolutionary gamechanger for the caregiving industry and for families who need to monitor and communicate with loved ones that might be more vulnerable.
2	ElenaBorelli,Gi ac omoPaolini,Fran	An IoT Solution for Independent	Published online2019Mar1 2. doi:	2019 Mar	a flexible and extensive digital platform for

	cesco Antoniazzi, Marina Barbiroli	Elderly	10.3390/s19051 258		Smart Homes is presented, exploiting the most advanced technologies of the Internet of Things, such as Radio Frequency Identification, wearable electronics, Wireless Sensor Networks, and Artificial Intelligence. Thus, the main novelty of the paper is the system- level description of the platform flexibility allowing theinteroperabil ity of different smart devices.
3	SathishKumar.R, Nivedha.K, Anitha.K,Jayapra kash. D	AN IOT BASED HEALTH CARE SYSTEM FOR ELDERLY PEOPLE	ISSN 2515- 8260	Volume 07, Issue 09, 2020	There is a rising concern in designing options for elderlies residing in a society with an increased population ageing.

Chapter - 3

IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

3.3 Proposed Solution

S.No.	Parameter	Description

1.	Problem Statement (Problem to be solved)	Sometimes the elderly forgets to take their medication at the appropriate time. They also forget which medication He or she should take at that time. It is also difficult for doctors and caregivers to monitor patients around the clock. This medicine reminder system was created to address this issue. A user (caretaker) app is created that allows him to set the desired time and medicine
2.	Idea / Solution description	We present a smart Internet of Things-based medication reminder system. The suggested plan was specifically designed for the Android operating system. We use a reminder system for our system, which sounds an alarm when it's time to take your medication. Additionally, the user can set their medication time using an android application. There will be some features in the application that allow the user to learn more specifics about their medication. It keeps track of the medications, allowing the user to adjust how much medication to take within the application
3.	Novelty / Uniqueness	It is an easy-to-use app that reminds users to take their medications and get them refilled, warns about drug interactions, and assists caregivers in managing prescriptions for loved ones.
4.	Social Impact / Customer Satisfaction	I constructed these proto-personas, or names, based on the research findings from the user interview. They would be crucial to the rest of the design process. All design decisions may be assessed and reevaluated using these personas, keeping the user and their perspective in mind.
5.	Business Model (Revenue Model)	There is no one-size-fits-all answer when it comes to business. The model you select will depend on your target market, business objectives, and the resources you already have
		available.

6.	Scalability of the Solution	where the user can set the time for their medication. There will be some features in the application that allow the user to learn more specifics about their medication. It keeps track of the medications, allowing the user to adjust how much medication to take within the application

3.4 Problem Solution fit

Problem-Solution fit canvas 2.0   Purpose / Vision   Team Id : PNT2022TMID07381

1. CUSTOMER SEGMENT(S) CS
Who is your customer?
i.e. working parents of 0-5 y.o. kids

Customer is a Old man or woman who is suffering from some health issues who doesn't have a personal care taker to give prescribed medicine on time

6. CUSTOMER CONSTRAINTS CC
What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

The customer is unaware of the presciption due to lack of knowledge to read a particular prescription. He/She is forgetting to take medicine on time before and after food because no care taker to remind.

5. AVAILABLE SOLUTIONS AS
Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

If the medicine time arrives the web application will send the medicine name to the IOT device. The device will receive the medicine name and notify the user with voice commands.

2. JOBS-TO-BE-DONE / PROBLEMS J&P
Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

*Forgot to take medicine
*The person will be notified to take medicine in a right time using alert messages

9. PROBLEM ROOT CAUSE RC
What is the real reason that this problem exists?
What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

The seniors don't have care taker to guide them to take medicine according to the prescription because care taker lead their own life with their busy schedules so there is need of additional source.

7. BEHAVIOUR BE
What does your customer do to address the problem and get the job done?
i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

The seniors directly seek for help to allot a person or any other devices which is based on reminding the seniors about the medicines which should be taken and monitor around the clock.

3. TRIGGERS TR
What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news ...

*Promote the usage of app through advertisements
*Seniors with learning disabilities may also triggers the usage of app

4. EMOTIONS: BEFORE / AFTER EM
How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

*Feeling taking correct medicines at correct time
*After the usage of appFthey feel healthy

10. YOUR SOLUTION SL
If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

An app is build for the user which enables him/her to set the desired time and medicine name to the IOT device. The device will receive the medicine name and notify the user with voice commands.

8. CHANNELS of BEHAVIOUR CH
8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

*Upload details about medicine and get alert messages on correct time

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

*Setting alarm at the correct time

Problem Solution it canvas is licensed under a Creative Commons Attribution NonCommercial NoDerivatives 4.0 license
Created by Daria Nepriakhina / Amaltama.com   ★ AMALTAMA

Chapter - 4
REQUIREMENT ANALYSIS

4.1 Functional requirement

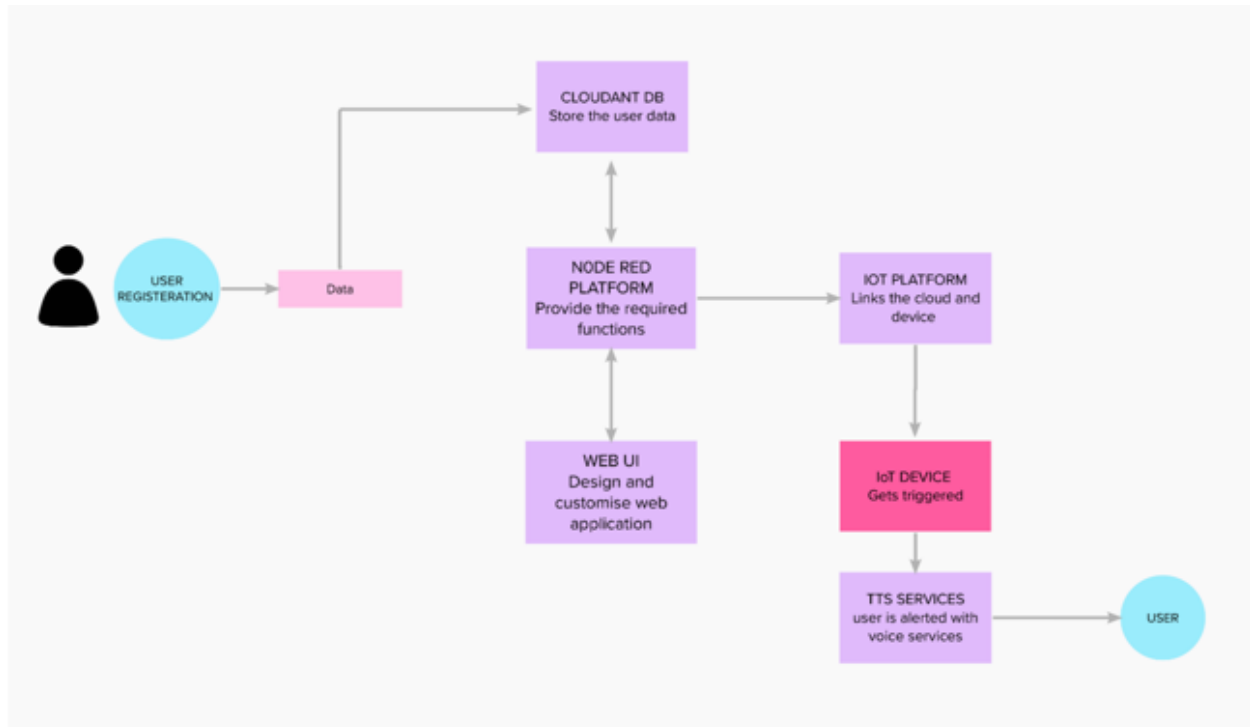| FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form in the application.
FR-2	User Confirmation	Confirmation within application.
FR-3	Internet Connectivity	Users should have a stable internet connection to access the app.
FR-4	Data management	All the data are managed & manipulated using the cloud.
FR-5	User Input management	All the user's data are gotten with the help of a text field in the dashboard in the app.
FR-6	Acknowledgement	All the data are stored in the cloud via the app and acknowledgment will be given to the user.

4.2 Non-Functional requirements

| FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The app is made with a simple UI, so the elders can easily use the app.
NFR-2	**Security**	All the data are stored in the IBM cloudant DB, so the user's data will be secured.
NFR-3	**Reliability**	As the data are stored in the IBM cloud, the user's data will be reliable and confidential.
NFR-4	**Performance**	As the app uses virtual sensors, so the accuracy and performance will be high.
NFR-5	**Availability**	The data stored in the cloud is available for all the time, So the users can avail the app all the time.
NFR-6	**Scalability**	Even though the users count increases, the app will be more scalable.

Chapter - 5

PROJECT DESIGN

5.1 Data Flow Diagrams

5.2 Solution & Technical Architecture
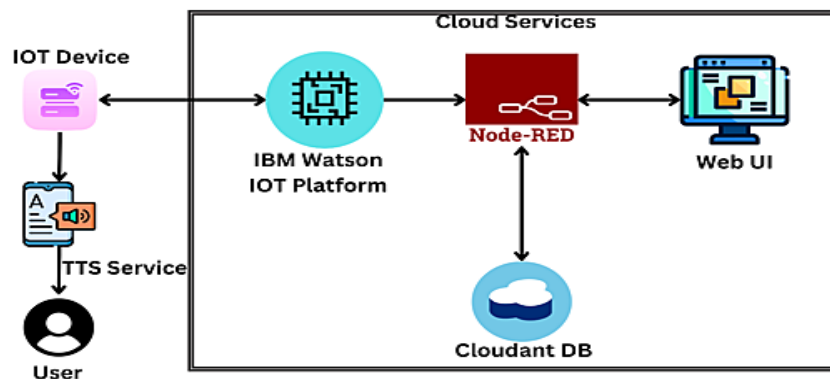
5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Senior user)	caretaker	USN-1	As a user, I want to take Medicines on time and monitor my health	I want to take medicines on time	High	Sprint-1
Customer (Diabetes Patient)	Smart medicine box	USN-2	As a user, I want to take my tablets on time by voice command	I want to take my tablets on time by voice command	High	Sprint-1
Customer (Thyroid Patient)	Smart medicine box	USN-3	As a user, my patient needs to take medicines on time and monitoring the activity	My patient needs to take medicines on time	Medium	Sprint-2
(Coma Patient)	Caretaker	USN-4	As a user, my patient needs medication time and prescription should load indatabase for upcoming	My patient medication time and prescription should be in	low	Sprint-4

			week	database list		
Customer (Disabled People's)	Smart medicinebox	USN-5	As a user ,i need to take my medicine in nearby places with light notification	I need to take my medicine in nearby places with light notification	Medium	Sprint-3

Chapter - 6

PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, and password, and confirming my password.	3	High	Parkavi V
Sprint-1	Confirmation Email	USN-2	As a user, I will receive a confirmation email once I have registered for the application	4	High	Niranjana Devi V
Sprint-1	Authentication	USN-3	As a user, I can register for the application through Gmail and mobile app.	4	Medium	Dharshanapriya V
Sprint-1	Login	USN-4	As a user, I can log into the application by entering email & password	3	High	Revathi M
Sprint-1	Dashboard	USN-5	As a user, I need to be able to view the functions that I can perform	4	High	Dharshanapriya V Niranjana Devi V
Sprint-2	Notification	USN-1	As a user, I should be able to notify my parent and guardian in emergency situations	10	High	Parkavi V Revathi M
Sprint-2	Store data	USN-2	As a user, I need to continuously store my location data into the database.	10	Medium	Niranjana Devi V
Sprint-3	Communication	USN-3,1	I should be able to communicate with user	6	Low	Revathi M
Sprint-3	IoT Device – Watson communication	USN-1,4	The data from IoT device should reach IBM Cloud	7	Medium	Niranjana Devi V
Sprint-3	Node RED- Cloudant DB communication	USN-5,2	The data stored in IBM Cloud should be properly integrated with Cloudant DB	7	High	Dharshanapriya V
Sprint-4	User – WebUI interface	USN-1,4	The Web UI should get inputs from the user	6	High	Dharshanapriya V Revathi M
Sprint-4	Alarm	USN-2,3,5	The Alarm of the remainder should be done based on the medication time	7	High	Parkavi V Niranjana Devi M

6.2 Sprint Delivery Schedule

Sprint	Total Story Points	Durati on	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

6.3 Reports from JIRA

Chapter - 7

CODING & SOLUTIONING

7.1 Feature 1

Node-Red

It is built on Node. js, which is a none-blocking, lightweight I/O model, making it lightweight and efficient. Flows created in Node-RED are stored using JSON, and can imported and exported and shared with ease

json code:

[{"id":"25e80d5f7eabd726","type":"tab","label":"Flow 6","disabled":false,"info":"","env":[]},{"id":"5f4d0ada73cc55c1","type":"inject","z":"25e80d5f7eabd726","name":" ","props":[{"p":"payload._id","v":"","vt":"date"},{"p":"topic","vt":"str"}],"repeat":"1","crontab":"","once":false,"onceDelay":0.1,"topic":"","x":110,"y":60,"wires":[["9c8adefc6d1779c4"]]},{"id":"9c8adefc6d1779c4","type":"functio n","z":"25e80d5f7eabd726","name":"","func":"var d= new Date();\nvar utc=d.getTime() + (d.getTimezoneOffset() * 60000);\nvar offset=5.5;\nnewDate = new Date(utc + (3600000*offset));\nvar n=newDate.toISOString()\nvar date = n.slice(0,10)\nvar time = n.slice(11,16)\nglobal.set('time',time)\nmsg.payload=date+\" \"+time\nreturn msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":180,"y":200,"wires":[["8f7d76639d 5f94dd"]]},{

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,["551edaf7fb9ec70d"]]},{"id":"551edaf7fb9ec70d","type":"function","z":"25e80d5f7eabd726","name":"","func":"
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\nreturn
msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":620,"y":180,"wires":[["1e02d85ab74e642c","10
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:"cmd","devic
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t=msg.payload.time\nmsg.payload={\n   \"medicine\": msg.payload.medicine,\n   \"_id\":d+\"
\"+t\n}\nreturn
msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":250,"y":340,"wires":[["7b0e41295a
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\"medicine\":\"\",\n   \"time\":\"\"\n}\nreturn
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imeoutUnits":"seconds","rate":"1","nbRateUnits":"1","rateUnits":"second","randomFirst":"1","rando
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"id":"767bf6397ee88881","type":"http in","z":"25e80d5f7eabd726","name":"Store Medicine Datas","url":"/storeMedicine","method":"get","upload":true,"swaggerDoc":"","x":140,"y":640,"wires":[["cff980ca57cbe343"]]},{"id":"cff980ca57cbe343","type":"function","z":"25e80d5f7eabd726","name":"","func":"var d=msg.payload.date\nvar t=msg.payload.time\n\nmsg.payload={\n   \"medicine\":msg.payload.medicine,\n \"_id\":d+\" \"+t\n}\nreturn msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":360,"y":640,"wires":[["c34f9152122dc6a2","744d1a5ddabcfb2e","8de2752e48b09bfb"]]},{"id":"c34f9152122dc6a2","type":"http response","z":"25e80d5f7eabd726","name":"","statusCode":"","headers":{},"x":710,"y":640,"wires":[]},{"id":"744d1a5ddabcfb2e","type":"cloudant out","z":"25e80d5f7eabd726","name":"","cloudant":"f42e6b50.00d088","database":"medicinedata","service":"nodered-fysyl-2022--cloudant-1667109493143-42012","payonly":true,"operation":"insert","x":630,"y":720,"wires":[]},{"id":"8de2752e48b09bfb","type":"debug","z":"25e80d5f7eabd726","name":"","active":true,"tosidebar":true,"console":false,"tostatus":false,"complete":"false","statusVal":"","statusType":"auto","x":550,"y":820,"wires":[]},{"id":"f95865b1d9e1b711","type":"function","z":"25e80d5f7eabd726","name":"","func":"msg.payload={}\nglobal.set(\"medicine\",msg.payload);\nreturn

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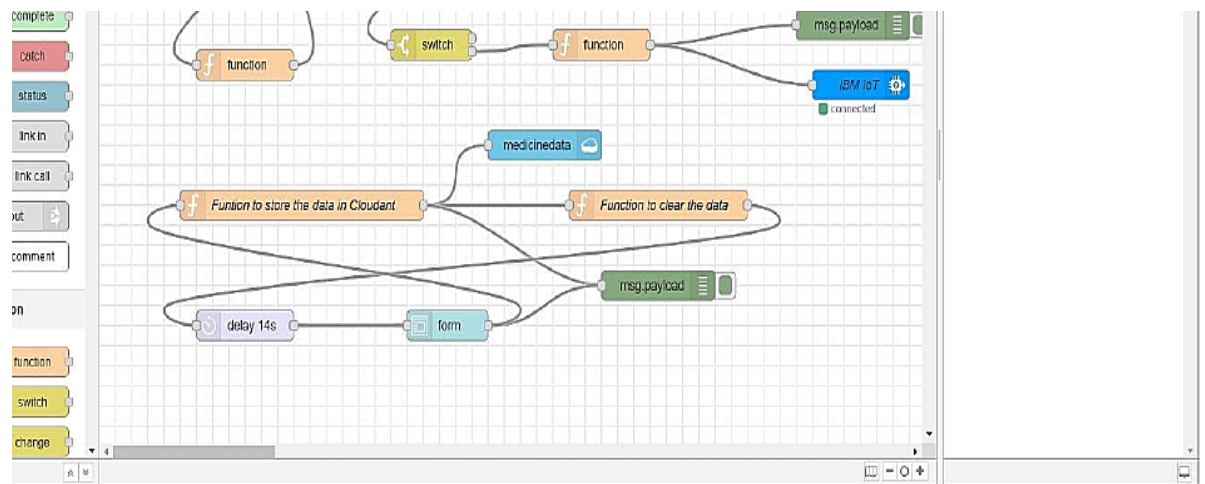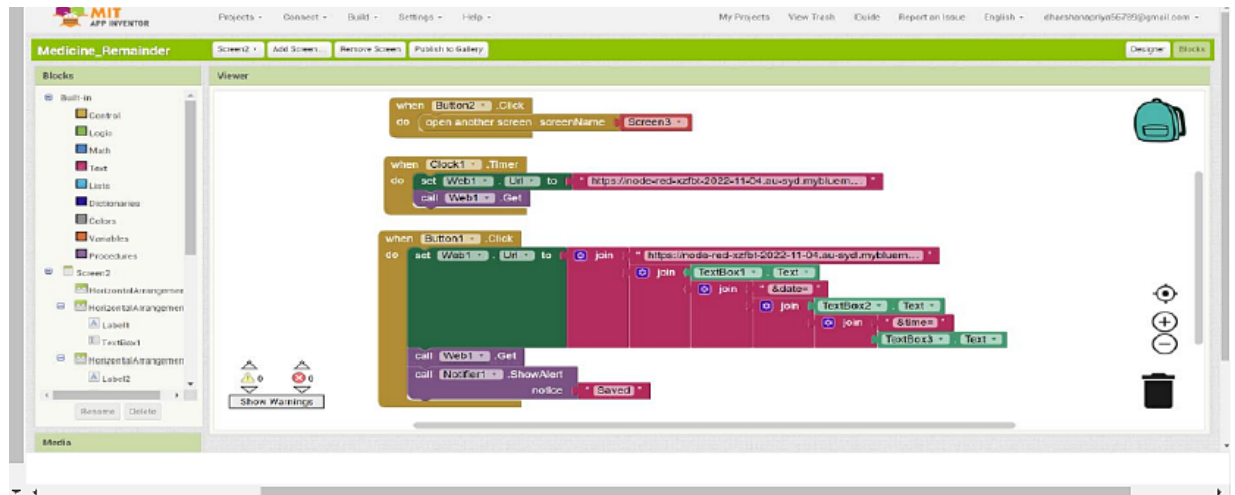
7.2 Feature 2

MIT App inventor

MIT App Inventor is an online platform designed to teach computational thinking concepts through development of mobile applications. Students create applications by dragging and dropping components into a design

view and using a visual blocks language to program application behavior

7.3 Database Schema (if Applicable)

Chapter - 8

TESTING

8.1 User Acceptance Testing

1. **Purpose of Document**

    The purpose of this document is to briefly explain the test coverage and open issues of the project-personal assistance for seniors who are self reliant at the time of the release to User Acceptance Testing(UAT).

2. **Defect Analysis**

    This reportshows the numberof resolved or closed bugs at each severity level,and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	4	2	3	20
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	11	2	4	20	37
Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8

Totals	24	14	13	26	77

3. Test Case Analysis

This report showsthe number of test casesthat have passed,failed, and untested

Section	Total Cases	Not Tested	Fa il	Pass
Print Engine	2	0	0	2
Client Application	2	0	0	2
Security	1	0	0	1

Chapter - 9

RESULTS

9.1 Performance Metrics

			NFT - Risk Assessment				
Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Voluem Changes	Risk Score	Justification
New	Low	Moderate	Moderate	Low	>10 to 30%	GREEN	As we had made this project in
							MERN stack With industry Mentor Aproval

			NFT - Detailed Test Plan				
	S.No	Project Overview	NFT Test approach	Assumptions/Dependencies/Risks	Approvals/SignOff		
	1	Medicine Reminder Web -UI	Stress	App Crash/ Developer team/ Site Down	Approved		
	2	Medicine Reminder Web -UI	Load	Server Crash/ Developer team/ Server Down	Approved		

			End Of Test Report				
FT Test approach	NFR - Met	Test Outcome	GO/NO-GO decision	Recommendations	Identified Defects (Detected/Closed/Open)	Approvals/SignOff	
Stress	Performance	CPU -01	GO	High Performance Netlify Cloud server	Closed	Approved	

Chapter - 10

ADVANTAGES & DISADVANTAGES

Advantages :

1. **Remote monitoring:** Real-time remote monitoring via connected IoT devices and smart alerts can diagnose illnesses, treat diseases and save lives in case of a medical emergency.

2. **Prevention**: Smart sensors analyze health conditions, lifestyle choices and the environment and recommend preventative measures, which will reduce the occurrence of diseases and acute states.

3. **Reduction of healthcare costs**: IoT reduces costly visits to doctors and hospital admissions and makes testing more affordable.

4. **Medical data accessibility**: Accessibility of electronic medical

records allow patients to receive quality care and help healthcare providers make the right medical decisions and prevent complications.

5. **Improved treatment management**: IoT devices help track the administration of drugs and the response to the treatment and reduce medical

error.

6. **Improved healthcare management**: Using IoT devices, healthcare authorities can get valuable information about equipment and staff

Disadvantages:

1. **Security and privacy**: Security and privacy remain a major concern deterring users from using IoT technology for medical purposes, as health monitoring solution have the potential to be breached or hacked. The leak of sensitive information about the patient's health and location and meddling with sensor data can have grave consequences, which would counter the benefits of IoT.

2. **Risk of failure**: Failure or bugs in the hardware or even power failure can impact the performance of sensors and connected equipment placing healthcare operations at risk. In addition, skipping a scheduled software update may be even more hazardous than skipping a doctor checkup.

3. **Integration**: There's no consensus regarding IoT protocols and standards, so devices produced by different manufacturers may not work well together. The lack of uniformity prevents full-scale integration of IoT, therefore limiting its potential effectiveness.

4. **Cost**: While IoT promises to reduce the cost of healthcare in the long-term, the cost of its implementation in hospitals and staff training is quite high.

Chapter - 11

Conclusion

It is an advanced digital era, we can also opt for expert agencies without thinking much about the distance. For example, suppose we stay in the European region. In that case, we can look for a healthcare app development company in the USA or a healthcare mobile app development firm in other states.

IoT is already practicing most of these technologies to assist healthcare in developing, and this development will proceed. Promptly than later, healthcare and the Internet of Things will become intertwined, ultimately modifying how we approach our healthcare.

Chapter - 12

FUTURE SCOPE

IoT has a lot of potentials and it's not only in healthcare. In future challenges of IoT in healthcare, many companies are working on new ways to solve the challenges with the help of this technology to help our medical world.

It can reach every patient from all over the world and connect doctors with patients. There is no denying that IoT has already made a huge impact and is only set to grow further.

It is a matter of time before the future use of IoT in healthcare medical industry will be run mostly by IoT technology and will be treating patients in less time and low cost of treatment.

Chapter - 13

APPENDIX

Source Code :

```
#include <WiFi.h>//library for wifi

#include <PubSubClient.h>//library for MQtt

#include <LiquidCrystal_I2C.h>

#include "DHT.h"// Library for dht11

#define DHTPIN 15    // what pin we're connected to

#define DHTTYPE DHT11   // define type of sensor DHT 11

#define LED 2

DHT dht (DHTPIN, DHTTYPE);// creating the instance by passing pin and typr of dht connected

void callback(char* subscribetopic, byte* payload, unsigned int payloadLength);



//-------credentials of IBM Accounts------
```

```c
#define ORG "64yf7x"//IBM ORGANITION ID

#define DEVICE_TYPE "b11m3edevicetype"//Device type mentioned in
ibm watson IOT Platform

#define DEVICE_ID "b11m3edeviceid"//Device ID mentioned in ibm
watson IOT

Platform

#define TOKEN "-&EMtr7l-v-Gz2G))e"
//Token String data3=""; int buzz= 13;


//-------- Customise the above values -------- char server[] = ORG
".messaging.internetofthings.ibmcloud.com";// Server Name char
publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of
event perform and format in which data to be send char
subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd
REPRESENT command type AND COMMAND IS TEST OF FORMAT
STRING

char authMethod[] = "use-token-auth";// authentication
method char token[] = TOKEN;

char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id

LiquidCrystal_I2C lcd(0x27,32,2);


//---------------------------------------

WiFiClient wifiClient; // creating the instance for wificlient

PubSubClient client(server, 1883, callback ,wifiClient); //calling the
predefined client id by passing parameter like server id,portand
wificredential
```

```cpp
void setup()// configureing the ESP32
{

  Serial.begin(115200);

  dht.begin();

  pinMode(buzz, OUTPUT);

  pinMode(LED,OUTPUT);

  delay(10);

  Serial.println();

  wificonnect();

  mqttconnect();
}


void loop()// Recursive Function
{
  if (!client.loop()) {

  mqttco
  nnect();
  }


}
```

```
/*...................................retrieving to Cloud..............................*/

void PublishData(float temp, float humid) {

  mqttconnect();//function call for connecting to ibm

} void
mqttconne
ct() {
  if (!client.connected()) {

    Serial.print("Reconnecting client to ");

    Serial.println(server);

    while (!!!client.connect(clientId, authMethod, token)) {

      Serial.print(".");

      delay(500);

    }


    initManagedDevice();

    Serial.println();

  } } void wificonnect() //function defination
for wificonnect {

  Serial.println();

  Serial.print("Connecting to ");


  WiFi.begin("Wokwi-GUEST", "", 6);//passing the wifi credentials to
```

establish the connection

```
  while (WiFi.status() != WL_CONNECTED) {
    delay(500);

    Serial.print(".");

  }

  Serial.println("");

  Serial.println("WiFi connected");

  Serial.println("IP address: ");

  Serial.println(WiFi.localIP());

}


void initManagedDevice() {
  if (client.subscribe(subscribetopic)) {

    Serial.println((subscribetopic));

    Serial.println("subscribe to cmd OK");

  } else {

    Serial.println("subscribe to cmd FAILED");

  }
}


void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)  {


  Serial.print("callback invoked for topic: ");
```

```cpp
    Serial.println(subscribetopic);
    for (int i = 13; i < payloadLength-2; i++) {
      //Serial.print((char)payload[i]);
      data3 += (char)payload[i];
    }


    Serial.println("Medicine Name: "+ data3);
    if(data3 != "")
    {
      lcd.init();

      lcd.print(data3);
      digitalWrite(LED,HIGH);
      tone(buzz, 100, 1000);
      delay(2000);
      digitalWrite(LED,LOW);
     noTone(buzz);
     delay(1000);


    }
    else
    {
  digitalWrite(LED,LOW);
```

```
 }
da
ta
3=
"";
}
```

GitHub & Project Demo Link :

GitHub Link: https://github.com/IBM-EPBL/IBM-Project-28211-1660108936

Demo Link: https://photos.app.goo.gl/eDftR34zPN9qwx1SA