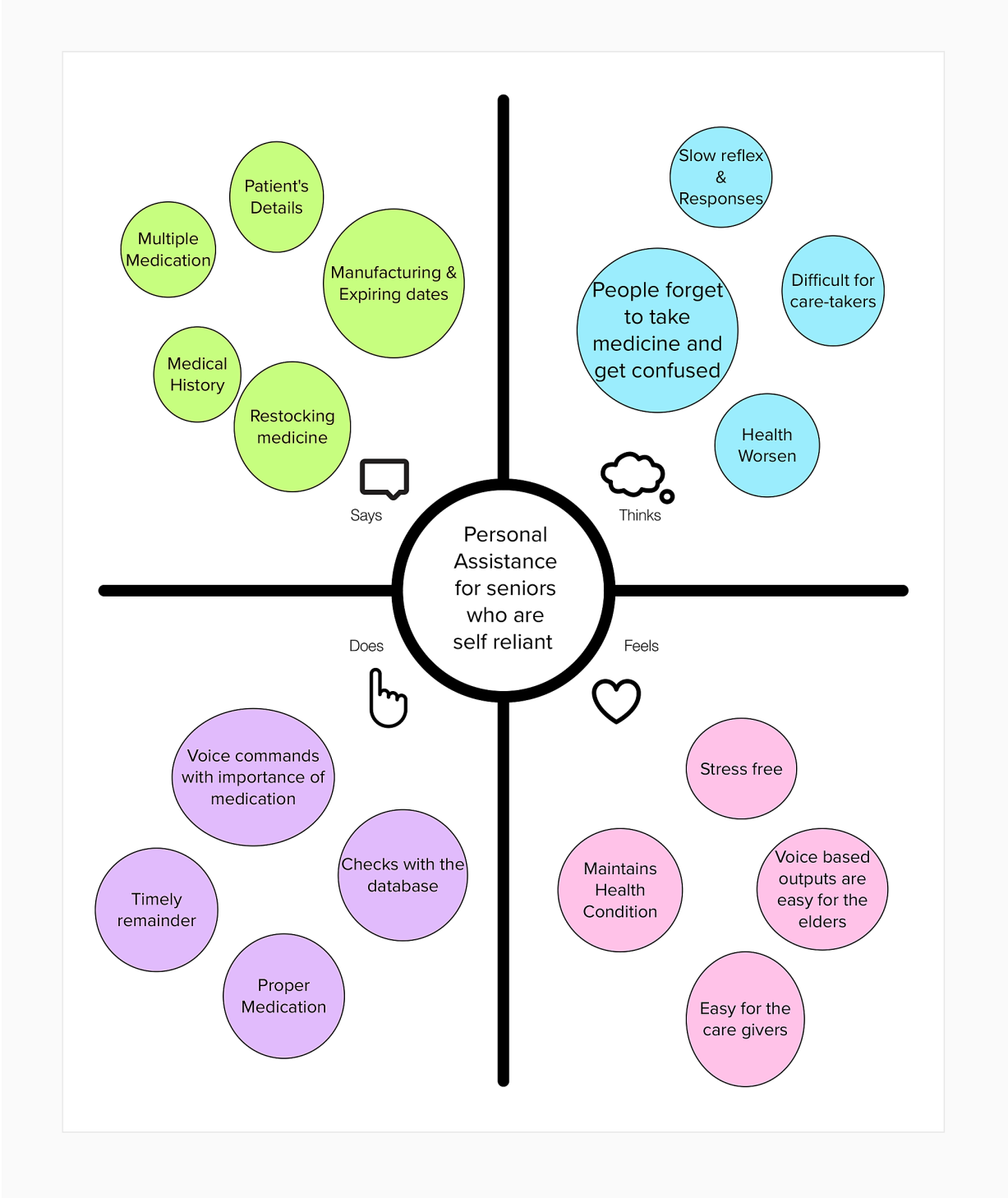
PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT

TEAM DETAILS:

S.NO	NAME	POSITION	COLLEGE
1	Thirupura Sundhari.K	Team Lead	K.Ramakrishnan College of Engineering
2	Srilalitha.R	Team Member 1	K.Ramakrishnan College of Engineering
3	Sathana.R	Team Member 2	K.Ramakrishnan College of Engineering
4	Sneka.S	Team Member 3	K.Ramakrishnan College of Engineering

PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT

EMPATHY MAP:

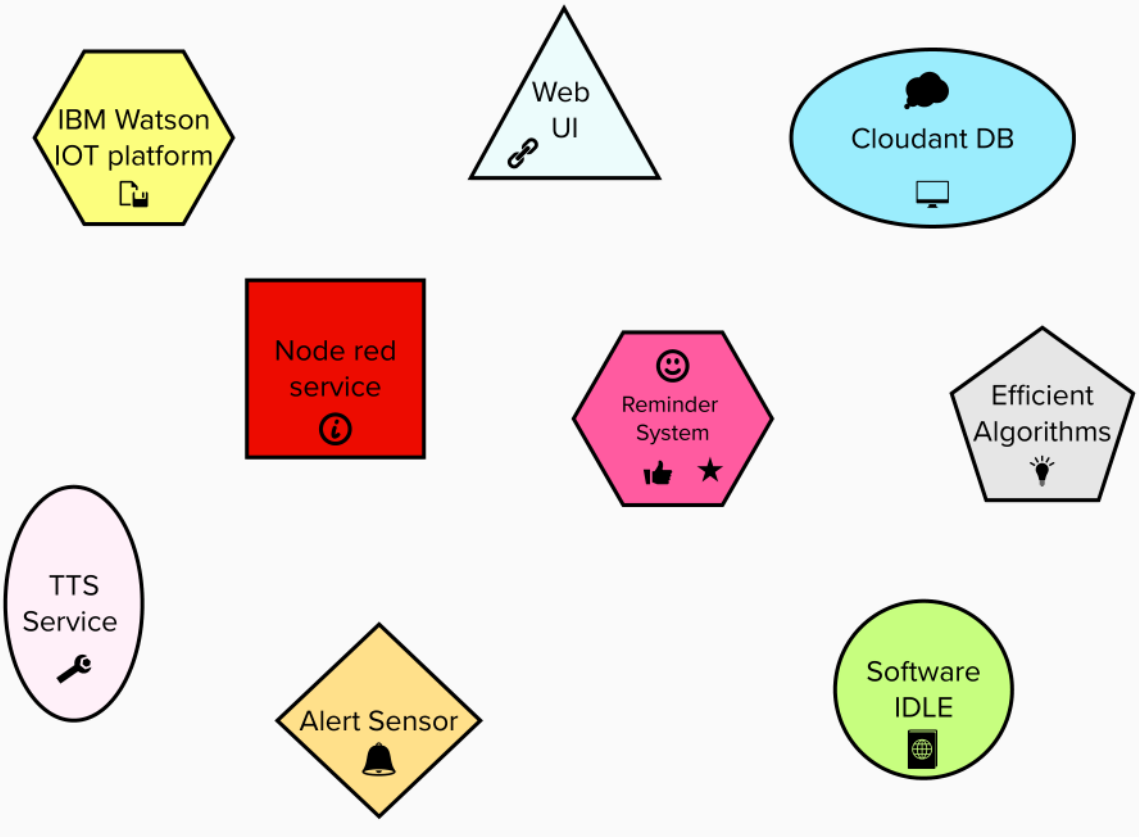


PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT

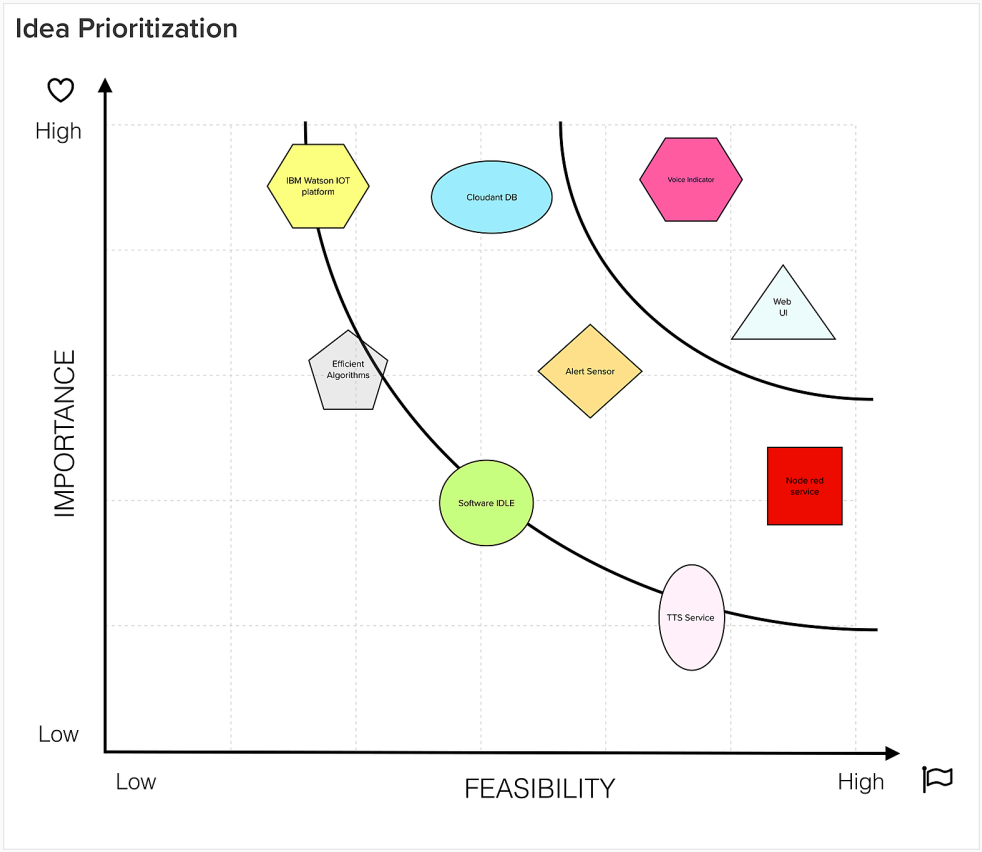
NEED STATEMENT:

Elderly people often forget to take medicine at regular period. So that, there is a need for a Reminder system inorder to maintain their health.

BIG IDEAS:



PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT



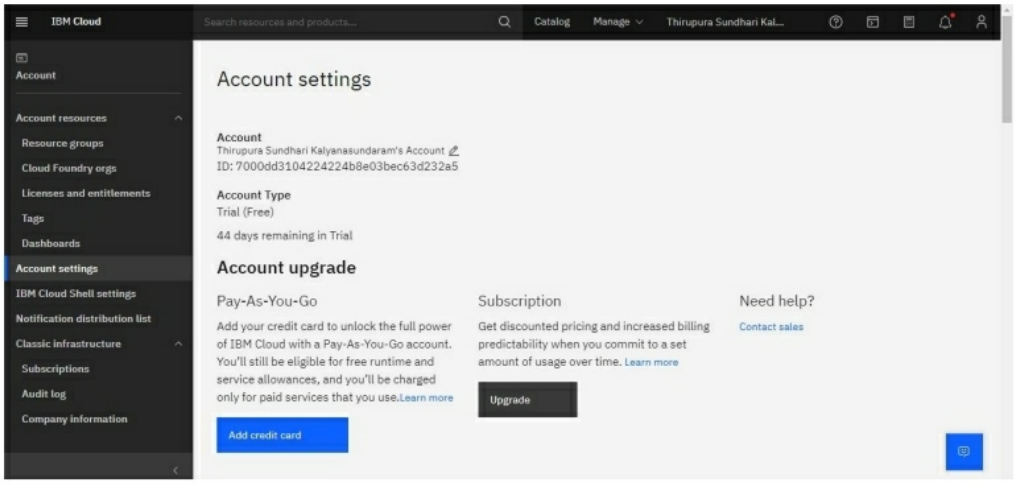
PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT

Prerequisities

IBM Cloud Services

Date	31 October 2022
Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant

IBM Cloud account created successfully

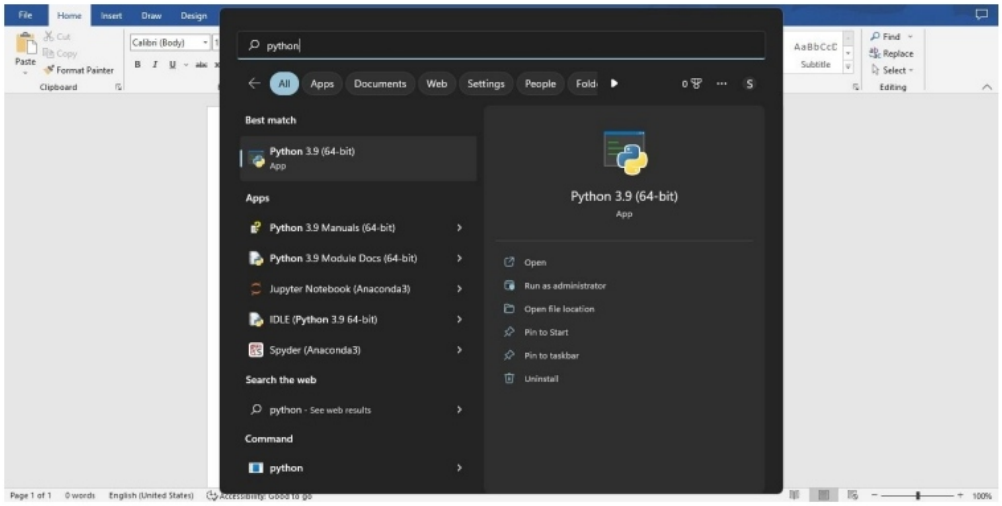


Prerequisities

Software

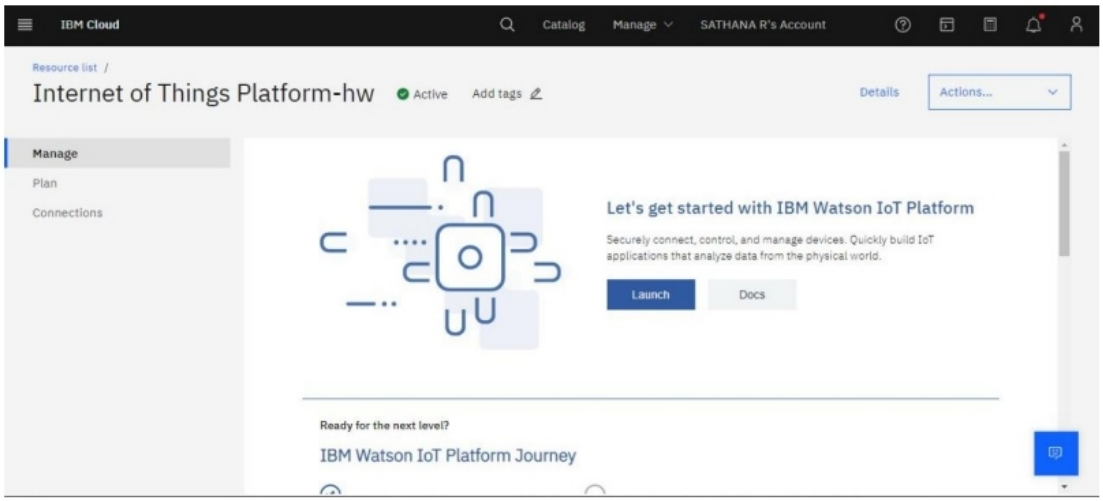
Date	31 October 2022
Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant

Python interpreter installed successfully



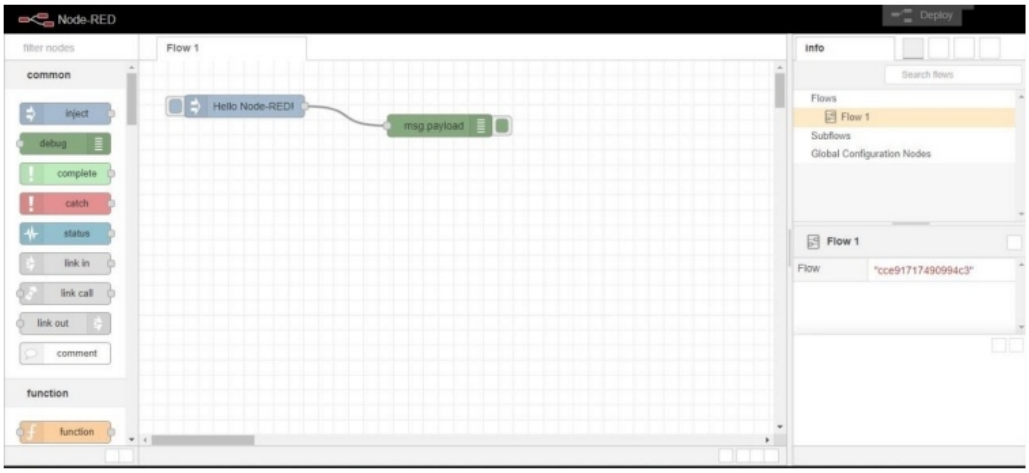
Create IBM Watson IoT Platform & Device

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant



Create Node-RED Service

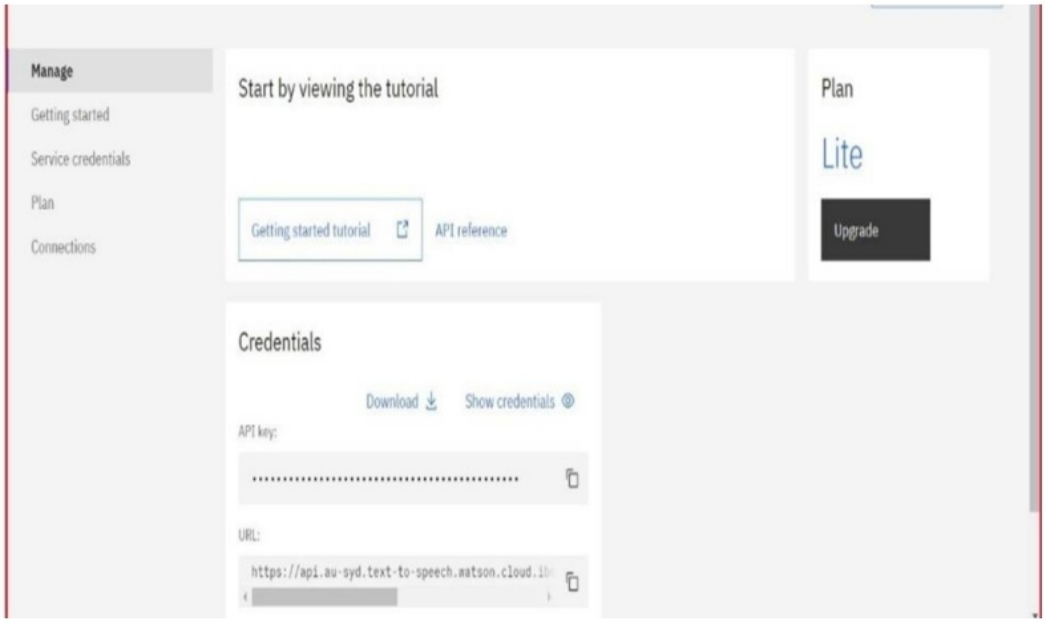
Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant



Create Text To Speech Service

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant

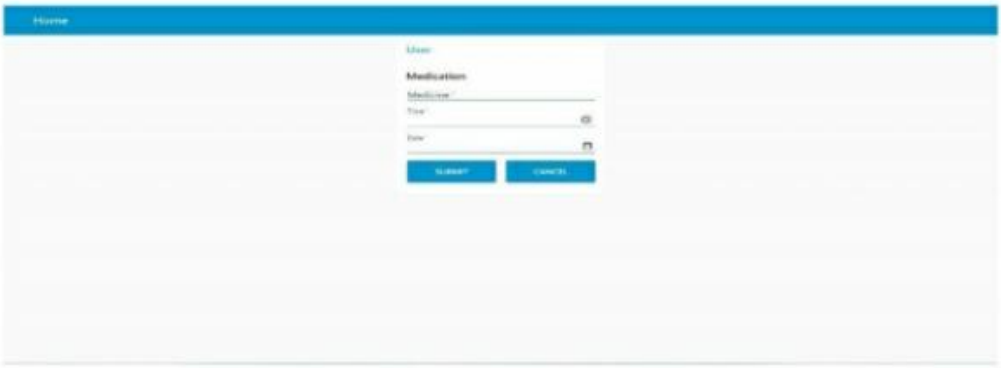
Text to speech created successfully



Create A Form

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant

Form created successfully



A Function to Compare the Time

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant

```
var d-msg.payload.date;
var t-msg.payload.time;
var date= d.slice(0,10)
var time-t.slice(10,25)
var hit=new Date(date+time)
hit.setDate(hit.getDate()+ 1);
var utc=hit.getTime()+(hit.getTimezoneOffset()*60000);
var offset=5.5
newDate=new Date(utc+(3600000*offset));
var n=newDate.toISOString()
var da=n.slice(0,10)
var ti=n.slice(11,16)
msg.payload={
   "_id": da+" "+ti, "name": msg.payload.name

}
return msg;
```

Project Design Phase-I
Proposed Solution Template

Date	30 September 2022
Team ID	PNT2022TMID11112
Project Name	Project -Personal Assistance for Seniors Who Are Self-Reliant
Maximum Marks	2 Marks

Proposed Solution Template:

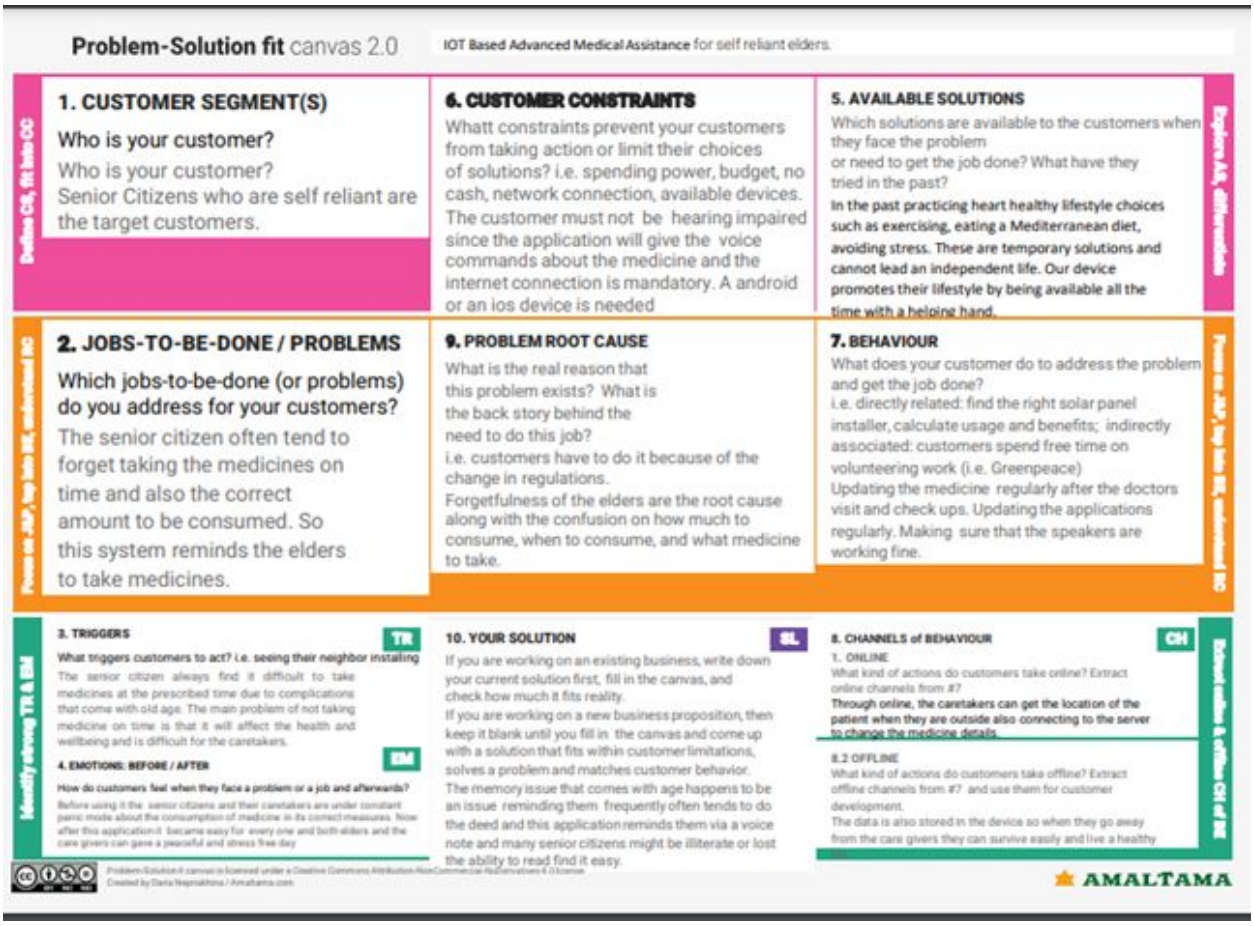
Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Sometimes elder people forget to take the medicine at the required time of medicines. And also forgets which medicine He/She have to take at required time. And it is difficult for Caretakers to monitor them around the clock. To avoid this problem, we have made this medicine reminder system
2.	Idea / Solution description	The ageing of a population increases the quantity of elders dependent in self-care. Thus, being dependent in a very home context could be a undeniable fact that deserves attention from social support entities integrated into the community, like nursing homes, which play a central role in supporting the families involved. Therefore, the planning and development of an archetype of a replacement system is proposed

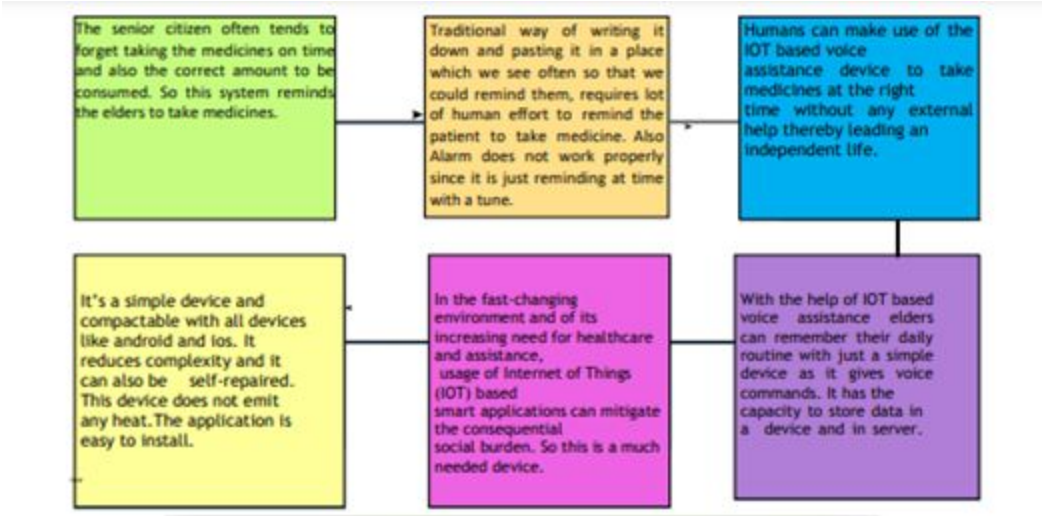
		central role in supporting the families involved. Therefore, the planning and development of an archetype of a replacement system is proposed, which main objectives are to accompany, teach, and share information between its users, taking under consideration safe medical validation and ethical issues, through emerging health ICT technologies. This archetype may be a reinforcement, that is, how to push and complete the knowledge and skills to house elders' well-being and health, also as their informal caregivers' welfare.
3.	Novelty / Uniqueness	An intervention called CAPABLE -- for Community Aging in Place, Advancing Better Living for Elders -- involves home visits with an occupational therapist, a registered nurse, and a handyman to work together with older adults to identify mobility and self-care issues in their homes and fix or modify them.implementing a system that helps the client remember to take medicines at the proper time each day, CAPABLE makes it more likely that older adults will be able to stay in their homes longer, improving health outcomes and decreasing medical costs.
4.	Social Impact / Customer Satisfaction	Personal assistants do not administer or manage medications, but they can remind your parent to take medicines when the time comes. Since many elderly forget to take medicines—or wind up taking double or triple doses—having someone

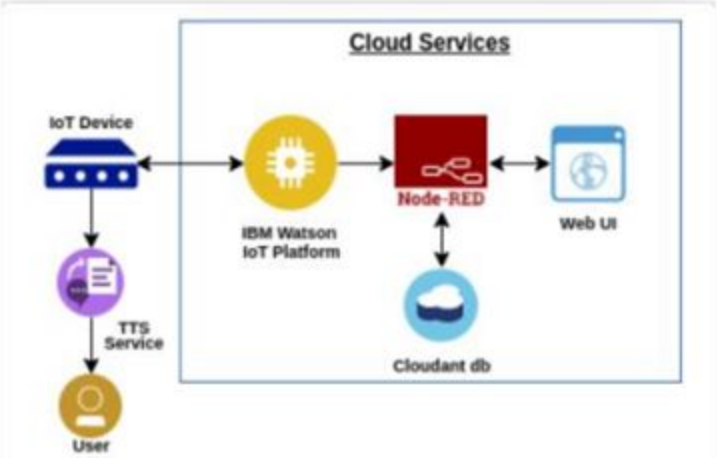
		there to remind them and monitor medications can prove invaluable. Mom and dad get the help they need, and you can stop worrying
5.	Business Model (Revenue Model)	Elderly people and improving their quality of life in the context of the possibility of increasing their effectiveness through the use of modern ICT solutions. The concept of the service e-marketplace platform for occupational activation of elderly people is presented and set in the context of Polish market conditions.On that basis the business model for implementation of such a platform for Polish market is proposed, what constitutes the main aim of the paper.
6.	Scalability of the Solution	It is expected that In a population of 100 low-income older adults on Medicaid and Medicare who will be made to participate in the CAPABLE study:79 percent will improve their self-care over the course of five months.They will experience a decrease in depressive symptoms similar to that of taking an anti-depressant medicine.

PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT

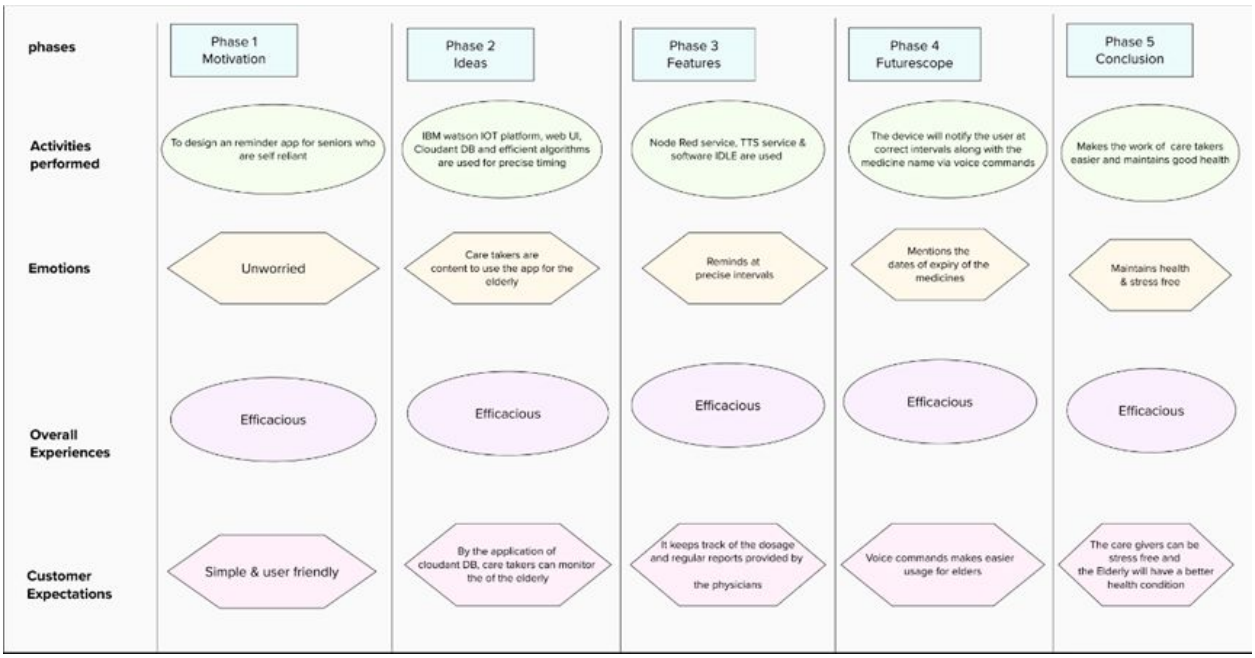


PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT





PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT



Project Design Phase-II
Solution Requirements (Functional & Non-functional)

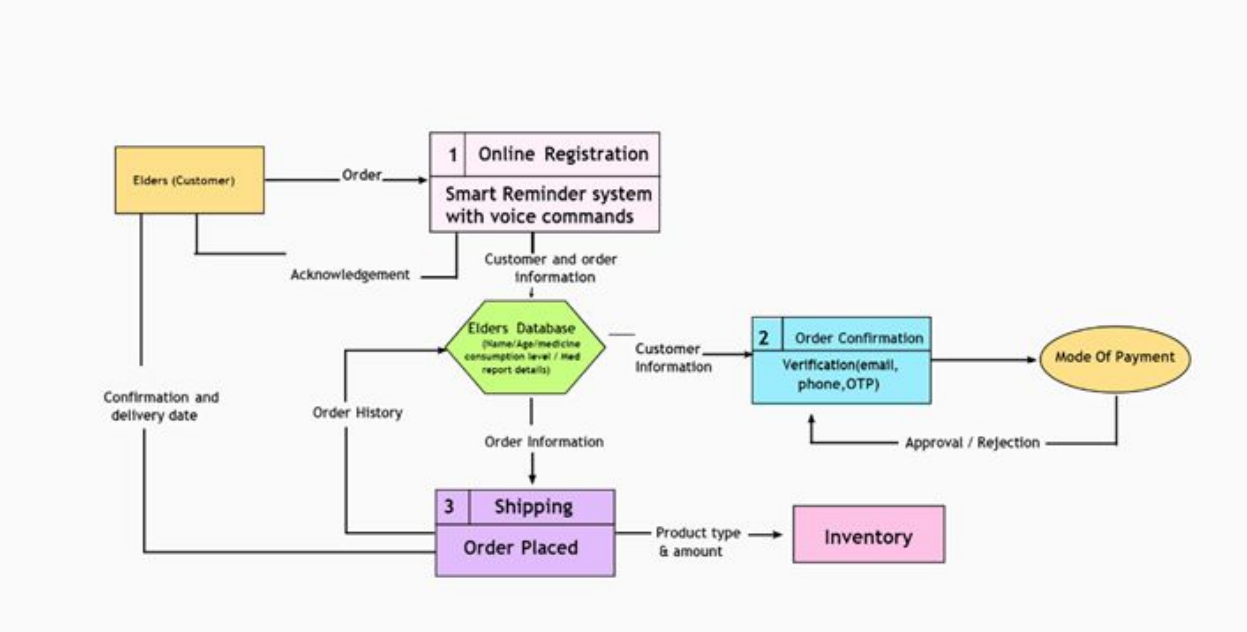
Date	03 October 2022
Team ID	PNT2022TMID11112
Project Name	Project - Personal Assistance for seniors who are Self reliant
Maximum Marks	4 Marks

Functional Requirements:

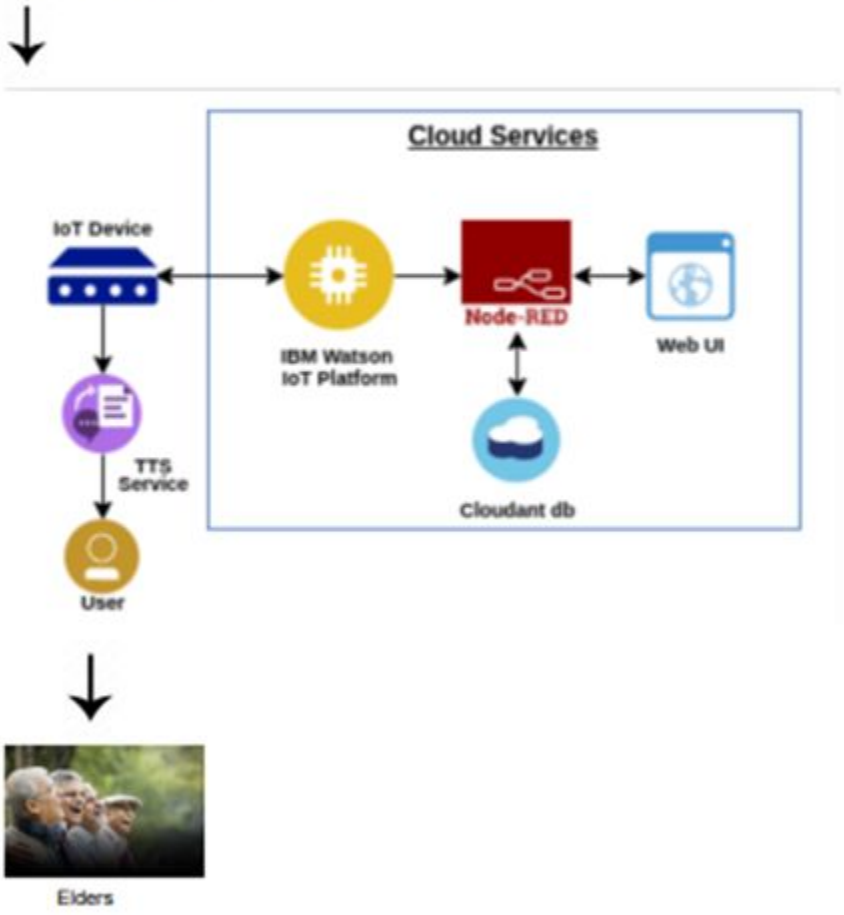
Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	**User Requirements**	Reminder system Voice commands Software IDLE, TTS service, IOT Watson platform
FR-2	**User Registration**	Manual Registration Registration through webpage Registration through Form Registration through Gmail
FR-3	**User Confirmation**	Confirmation via Phone Confirmation via Email Confirmation via OTP
FR-4	**Payment Options**	Cash on Delivery Net Banking/UPI Credit/Debit/ATM Card
FR-5	**Product Delivery and Installation**	Door Step delivery Take away Free Installation and 1 year Warranty
FR-6	**Product Feedback**	Through Webpage Through Phone calls Through Google forms

PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT



Medicine / Supplements



Elders

PROJECT PLANNING PHASE

PROJECT MILESTONE

Date	21 October 2022
Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant
Maximum Marks	4 marks

S.NO	ACTIVITY TITLE	ACTIVITY DESCRIPTION	DURATION
1	Understanding the project requirement	Assign the team members and create repository in the Github, Assign the task to each members and teach how to use and open and class the Github and IBM career education	1 WEEK
2	Starting of project	Advice students to attend classes of IBM portal create and develop an rough diagram based on project description and gather of information on IOT and IBM project and team leader assign task to each member of the project	1 WEEK
3	Attend class	Team members and team lead must watch and learn from classes provided by IBM and NALAYATHIRAN and must gain access of MIT license for their project	4 WEEK
4	Budget and scope of project	Budget and analyze the use of IOT in the project and discuss with team for budget prediction to predict the favorability for the customer to buy	1 WEEK

PNT2022TMID11112 - PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT

Project Planning Phase
Sprint Delivery Plan

Date	21 October 2022
Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors who Are Self-Reliant
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration Creation of IBM services like Node-RED, cloudant DB, TTS Service and design for IOT System.	USN-1	As a user, I must be able to login to the IBM Platform	2	High	Thirupura Sundhari.K Sillaitha.R
Sprint-2	Web UI Creation of web UI using Node-RED service	USN-2	As a user, I must be able to update the	2	High	Sathana.R Sneka.S
Sprint-3	Software Implementation Developing python code to retrieve data from cloudant db to send that data to IOT device	USN-3	As a user, I must push the details to the IOT device	2	High	Sneka.S Sillaitha.R
Sprint-4	Final demonstration and user testing. Generating voice commands using IBM Text to speech service	USN-4	As a user, I can log into the application by Entering email & password	2	High	Sathana.R Thirupura Sundhari.K

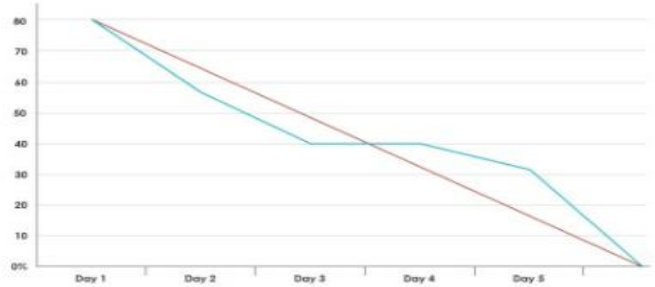
Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	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	30	30 Oct 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	49	06 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	50	07 Nov 2022

Velocity:

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:



PROJECT DEVELOPMENT PHASE

DELIVERY OF SPRINT 1

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for senior citizens whoare self-reliant
Team members	Thirupura Sundhari.K Srilalitha.R Sathana.R Sneka.S

SPRINT I: REGISTRATION INTO THE IBM CLOUD SERVICES

Outline of Sprint 1

This sprint delivery document contains the following,

1)Evidence of creating an account in IBM cloud (IBM IoT Watson platform)

2)Creation of NodeRED service

3)Creation of Cloudant DB

4)Creation of Text to Speech service.

PROJECT

DEVELOPMENT PHASE

DELIVERY OF SPRINT 2

Team ID	PNT2022TMID11112
Project Name	Project – Personal Assistance for senior citizens whoare self-reliant
Team members	Thirupura Sundhari K Srilalitha R Sathana R Sneka S

SPRINT II: Development of Web User Interface in NodeRED service of IBM

Outline of Sprint 2

This sprint delivery document contains the following,

1)To create a form dashboard to enter the medicine details.

2)To send the medicine name at the right time to the IoT device.

3)Total node flow of the entire Web UI.

4)The results of the web UI after deploying.

PROJECT

DEVELOPMENT PHASE
DELIVERY OF SPRINT 3

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for senior citizens who are self-reliant
Team members	Thirupura Sundhari K Srilalitha R Sathana R Sneka S

SPRINT III: Development of Python code (Software implementation)

Outline of Sprint 3

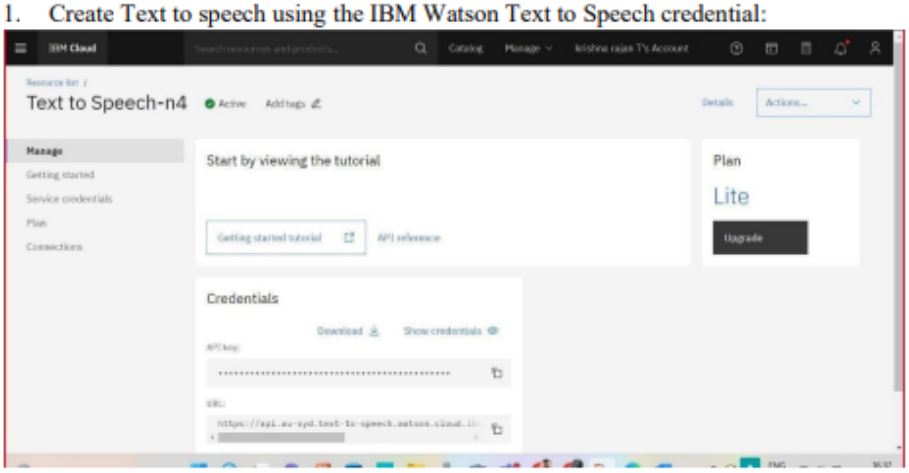
This sprint delivery document contains the following,

1)Python code to receive data from node red and send to IoT Watson platform
2)Updating of nodes in the node-red platform
3)The results of the web UI after deploying.

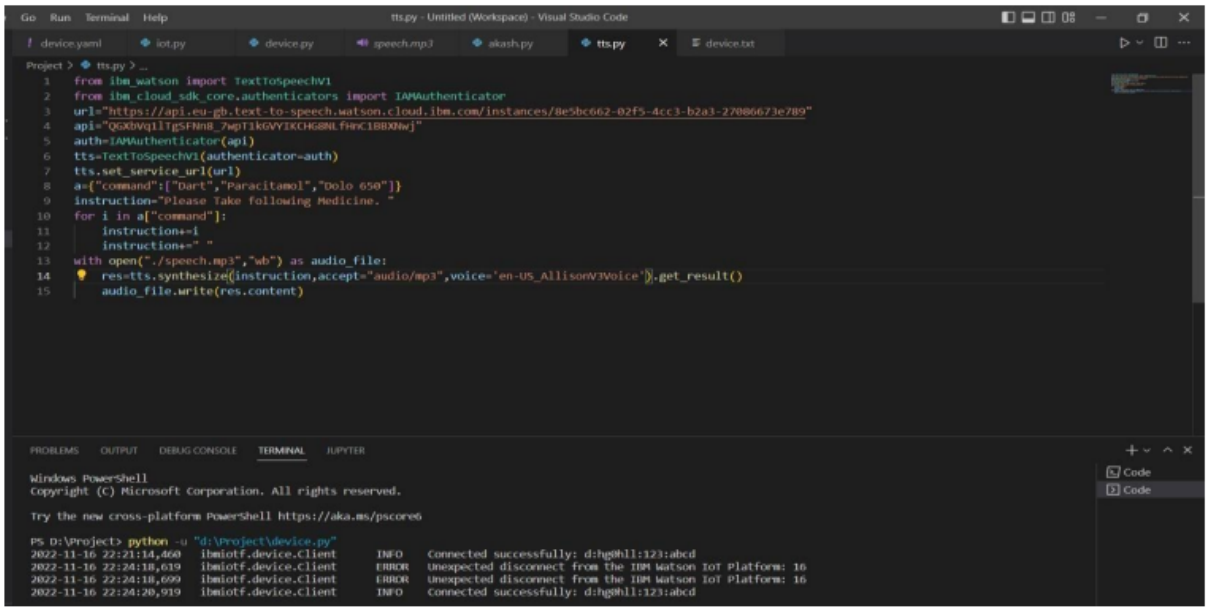
PROJECT DEVELOPMENT PHASE
SPRINT- 4

Team ID	PNT2022TMID11112
Project Name	Personal Assistance for Seniors Who Are Self-Reliant.
Team Members	Thirupura Sundhari.K Srilalitha.R Sathana.R Sneka.S

1. Create Text to speech using the IBM Watson Text to Speech credential:



Code:


Go Run Terminal Help
tts.py - Untitled (Workspace) - Visual Studio Code
device.yaml
iot.py
device.py
speech.mp3
akash.py
tts.py
device.txt
Project > tts.py > ...
from ibm_watson import TextToSpeechV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
url="https://api.eu-gb.text-to-speech.watson.cloud.ibm.com/instances/8e5bc662-02f5-4cc3-b2a3-27086673e789"
api="QGXbVQllTgSFNn8_7wpTlkGVYIKCHG8NLfHnC1BBXNwj"
auth=IAMAuthenticator(api)
tts=TextToSpeechV1(authenticator=auth)
tts.set_service_url(url)
a={"command":["Dart","Paracitamol","Dolo 650"]}
instruction="Please Take following Medicine. "
for i in a["command"]:
instruction+=i
instruction+=" "
with open("./speech.mp3","wb") as audio_file:
res=tts.synthesize(instruction,accept="audio/mp3",voice='en-US_AllisonV3Voice').get_result()
audio_file.write(res.content)
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS D:\Project> python -u "d:\Project\device.py"
2022-11-16 22:21:14,460 ibmiotf.device.Client INFO Connected successfully: d:hg0hll:123:abcd
2022-11-16 22:24:18,619 ibmiotf.device.Client ERROR Unexpected disconnect from the IBM Watson IoT Platform: 16
2022-11-16 22:24:18,699 ibmiotf.device.Client ERROR Unexpected disconnect from the IBM Watson IoT Platform: 16
2022-11-16 22:24:20,919 ibmiotf.device.Client INFO Connected successfully: d:hg0hll:123:abcd
Code
Code