

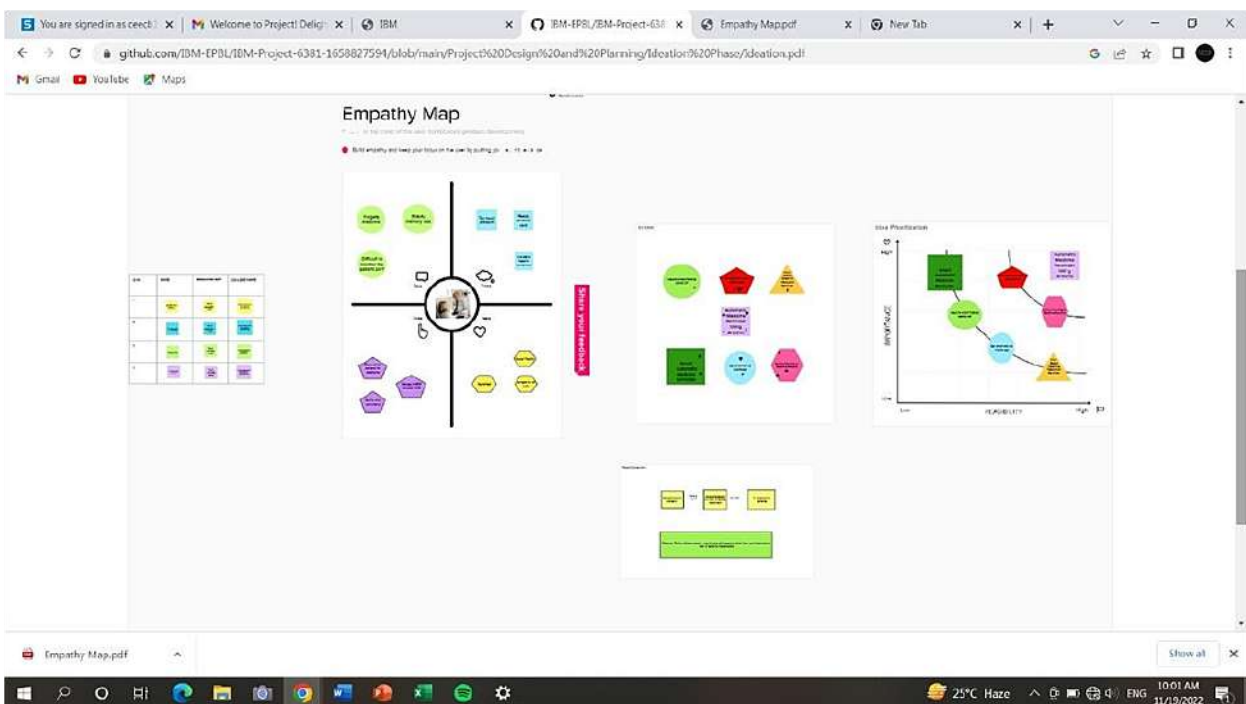
PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT

TEAM ID	PNT2022TMID11020
TEAM LEADER	Krithik Gokul S
TEAM MEMBER 1	Sagar T.N
TEAM MEMBER 2	Ranjith.R
TEAM MEMBER 3	Kautham Vetrivel K.S

PROJECT OBJECTIVES:

The main objective of this work is to help seniors maintain their quality of life at home and to keep them living their lives their way, as well as to lighten the load of full-time or family caretaker.

IDEATION :

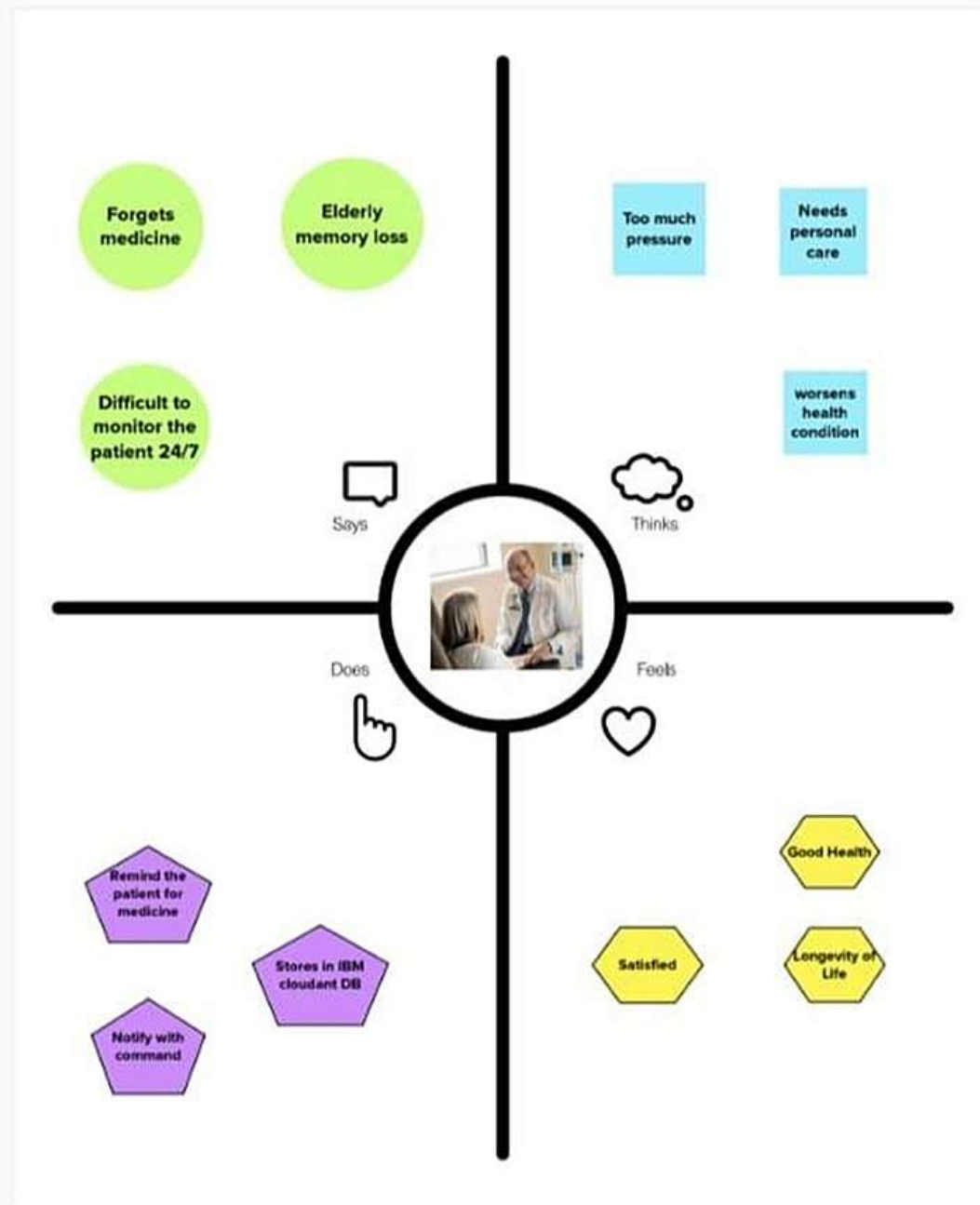


EMPATHY MAP:

Empathy Map

Dive into the mind of the user for focused product development

- Build empathy and keep your focus on the user by putting yourself in their shoes.



LITERATURE SURVEY:

Project Design Phase 1:-

1. Maria Gabriella Melchoire: Published on "IRCCS INRCA-National Institute of Health and Science on Ageing...2022". Caring help is essential for carrying out everyday activities when older persons age alone and become weak with functional limitations. The current study set out to examine the role and features of privately employed Personal Care Assistants (PCAs) who provide care for elderly people in Italy in light of the family's decreasing capacity to provide care and the under-resourcing of governmental services. In the "Inclusive ageing in place" (IN-AGE) project, 120 qualitative interviews with elderly persons in their homes in the Italian regions of Lombardy, Marche, and Calabria were conducted in 2019. Along with some basic quantifications of assertions, a content analysis was done.

Results revealed that PCAs were helpful in 27 situations, mostly when older citizens' health difficulties were raised.

2. Gunther Eysenbach: Published on "JMIR M health U health 2021". With the benefits of hands-free and eyes-free engagement modalities to manage requests, voice assistants based on smart speakers promise to support the elderly population. The advantages of this kind of gadget are seen differently by older persons, although little is known about this. The ease of a speech-based engagement contributed to the favourable first reception to voice assistants. Particularly, it was common to finish an engagement with a voice assistant by expressing gratitude or providing criticism on the quality of the responses. Asking queries about healthcare and streaming music were the two main themes of orders given during the first conversation. However, the majority of the subsequent responses were negative due to the challenges in creating a structured language for a command.

3. Mitra Venketesan: published on 2021 IEEE Pune Section International Conference (Pune Con)". The robot for the elderly discussed in this essay is made up of numerous electrical components that can be changed in the future and utilised to create new robotic appliances that may be used in a domestic setting. A personal assistant robot called "Robo care for Elderly" is a prototype that will one day be utilized to care for and accompany the elderly. The Raspberry Pi microcomputer, an ultrasonic sensor, a PIR sensor, a temperature sensor, LEDs, an integrated Bluetooth

module, a Dc motor, a servo motor, speakers, etc. are all part of this system. The major goal of the created work is to create a personal assistant robot prototype that is affordable and usable in every home, improving the usage of technology.

4. Ramin Yaghoubzadeh Torky published on "International Workshop on Intelligent Virtual Agents 2017". Cognitively impaired individuals struggle to independently plan their everyday activities. A virtual agent could be a helpful daily calendar aide, but this requires that these particular user groups accept the system and can communicate effectively with it. In this study, studies that address these issues for older users and users with cognitive impairment are presented. Results from focus groups and interviews indicate that using a participatory design approach can boost acceptance. The viability of spoken-language interaction is shown through actual interaction studies with a prototype, which also disclose mitigation techniques for comprehending issues.

5. Arsénio Reis published on "International Conference on Universal Access in Human- Computer Interaction ". One of the key contributors to a person's life quality degrading as their ageing process progresses is social isolation and loneliness. These factors, which are brought on by the person's decreased social engagement with their friends, family, and former coworkers groups, can have a significant impact on their general health. On the other hand, software and hardware technologies have advanced to the point where electronic assistants can now both speak with users using natural voice language and gather information from them via camera photos. In this regard, a paradigm for the elderly's acceptance of electronic intelligent assistants has been put forth in prior research. In the current study, it is evaluated whether employing.

6. Manuel Bolaños published on " Universidad de Granada, E.T.S. of Computer and Telecommunication Engineering, Granada, Spain". Because of the trend toward higher population growth worldwide, some authors agree that older people experience social and technological isolation, if not outright exclusion, as a result of their ageing condition. Therefore, studies are required to identify the expectations of this population in terms of the usage and adoption of technology. As a result, new technological developments implement specific requirements that aid older people in adjusting to their use. This essay discusses a study conducted to assess how well-liked smart virtual assistants are among the elderly.

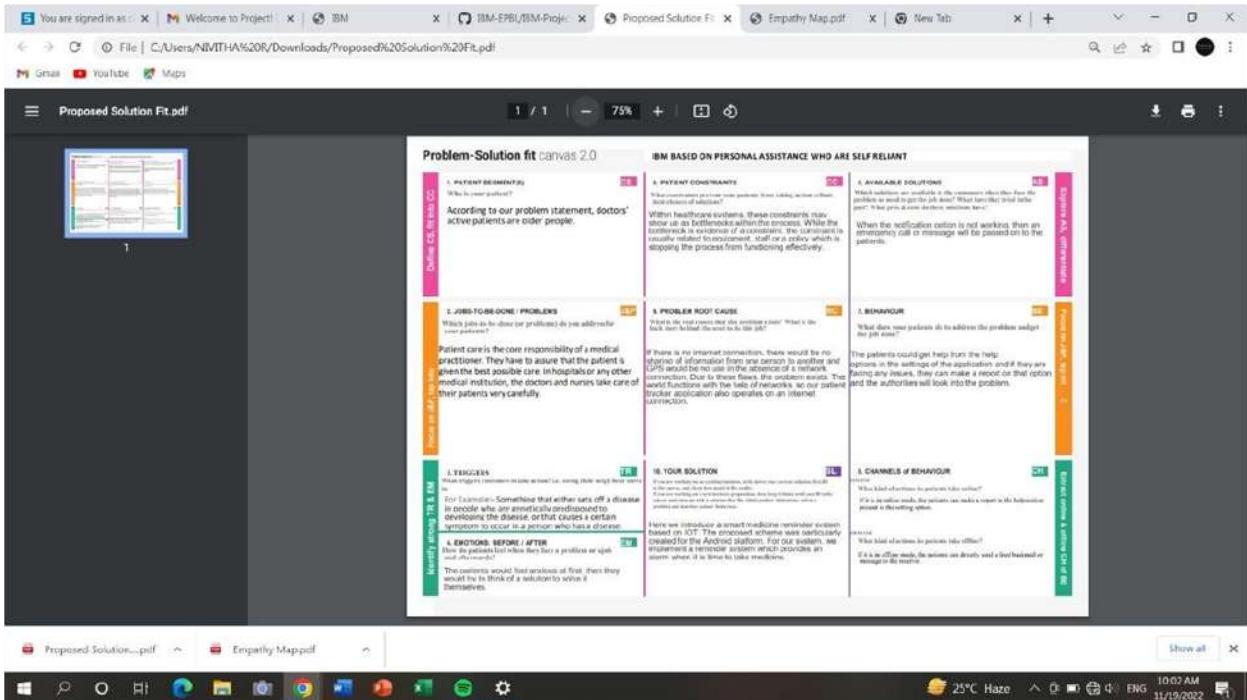
Considering certain experiences in the development and implementation of technology for this kind of study, the design and execution of a recreational strategy to remember taking drugs.

7. Katherine O'Brien MD published on “<https://doi.org/10.1111/jgs.16217> **on 2019”.**

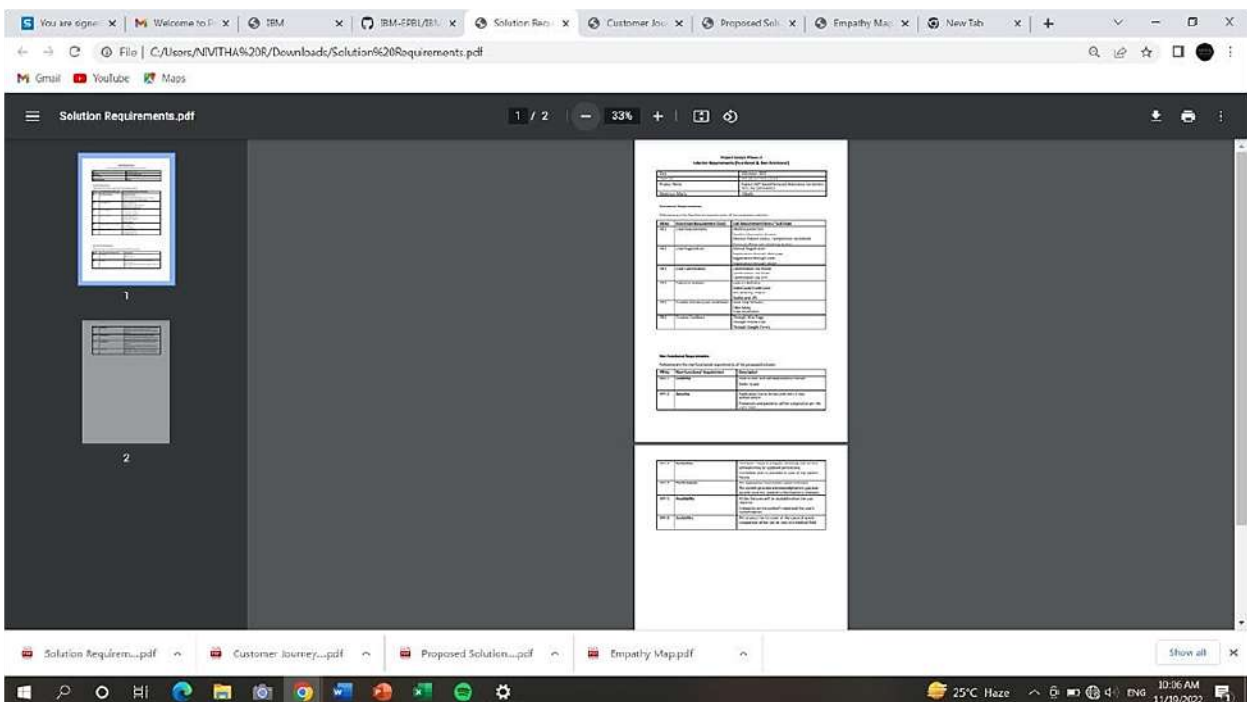
The desire of many older persons to age in place may be supported with voice-controlled intelligent personal assistants (VIPAs; examples include Amazon Echo and Google Home). The use of VIPAs by older persons in the actual world hasn't been studied before. We wanted to find out how elderly people and their caretakers use VIPAs. Retrospective analysis of all Amazon Echo reviews with confirmed purchases that were published on the website between January 2015 and January 2018, with the health-related older adult key terms filtered out. To find pertinent themes, open-ended reviews were qualitatively examined.

8. Heetae Yang and Hwansoo Lee published on “*Information Systems and e-Business Management* on 2018”. The market for virtual personal assistant (VPA) gadgets is emerging as a new field of conflict for international information technology businesses with the development of artificial intelligence technologies. Based on perceived value theory, this study creates a thorough research model to explain why potential users could choose to embrace and employ VPA devices. It examines the connection between qualities associated to a product's perceived utility, delight, and enjoyment (i.e., portability, automation, and visual attractiveness). Using data from 313 survey samples, partial least squares analysis is used to assess the research model and hypotheses. The findings demonstrate that usage intention is significantly influenced by perceived utility and enjoyment. The software and hardware-based utilitarian value, has the biggest effect on perceived usefulness.

PROBLEM SOLUTION FIT:



PROPOSED SOLUTION:

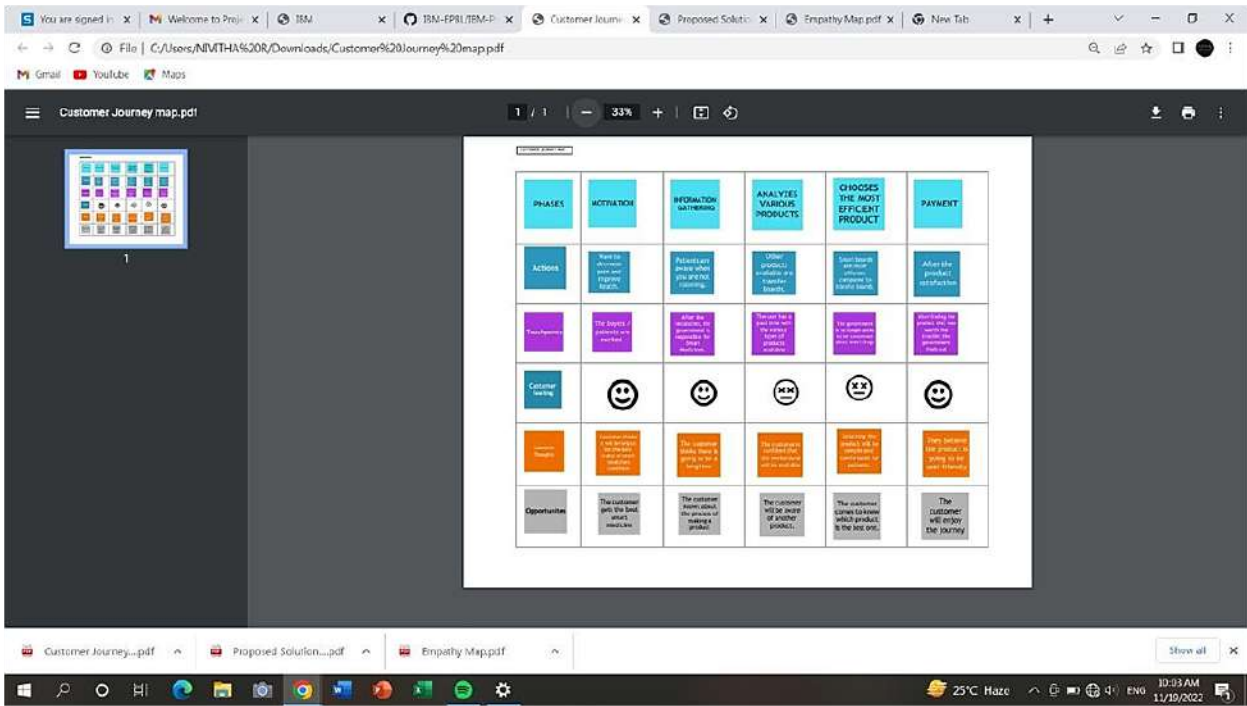


SOLUTION ARCHITECTURE:

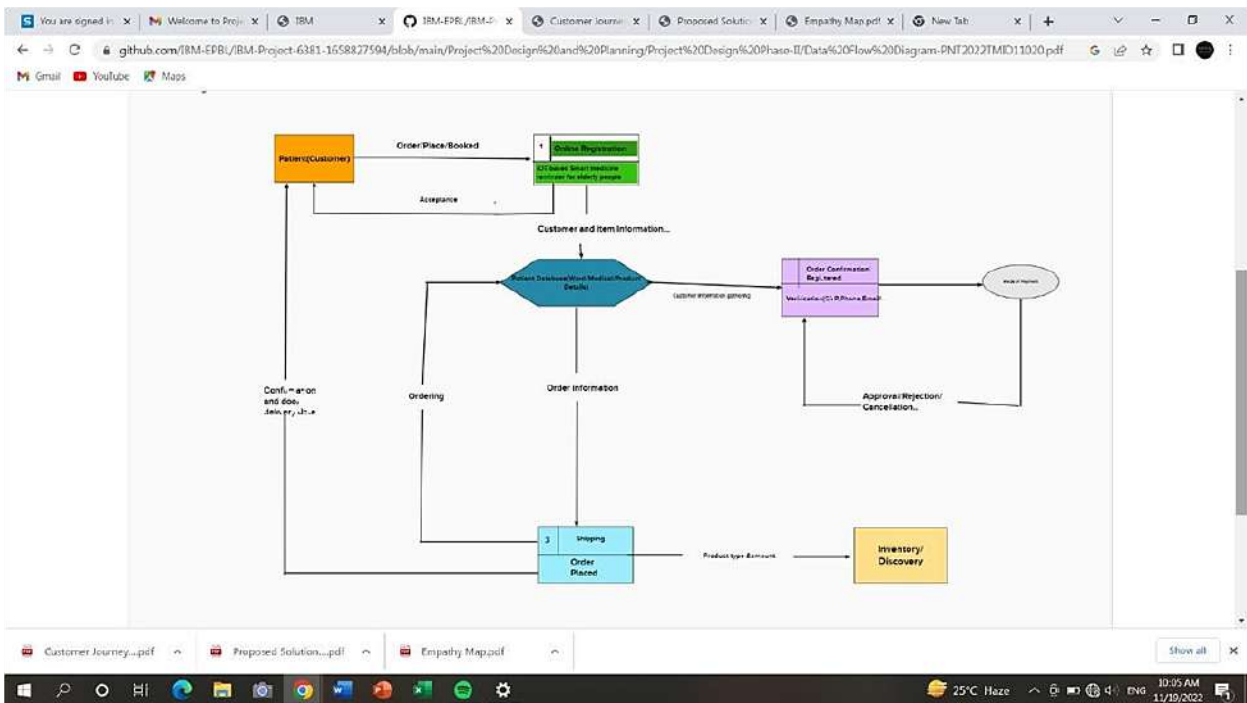


PROJECT DESIGN PHASE 2 :

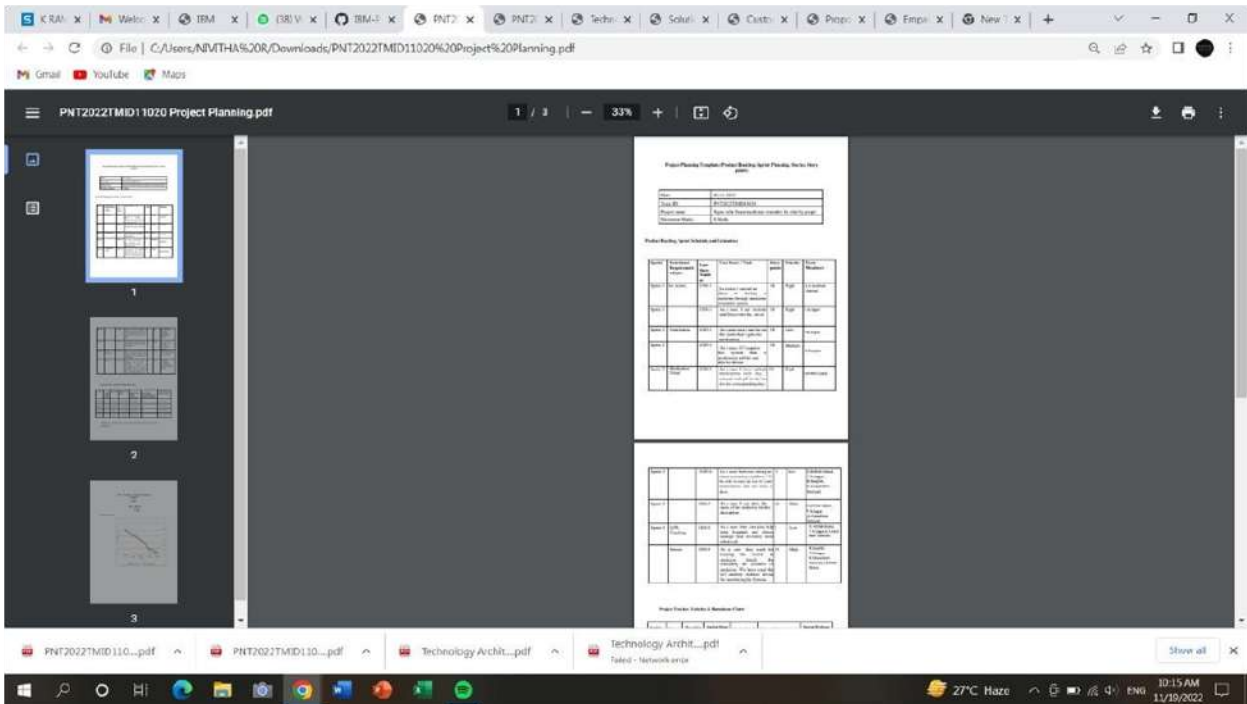
CUSTOMER JOURNEYMAP :



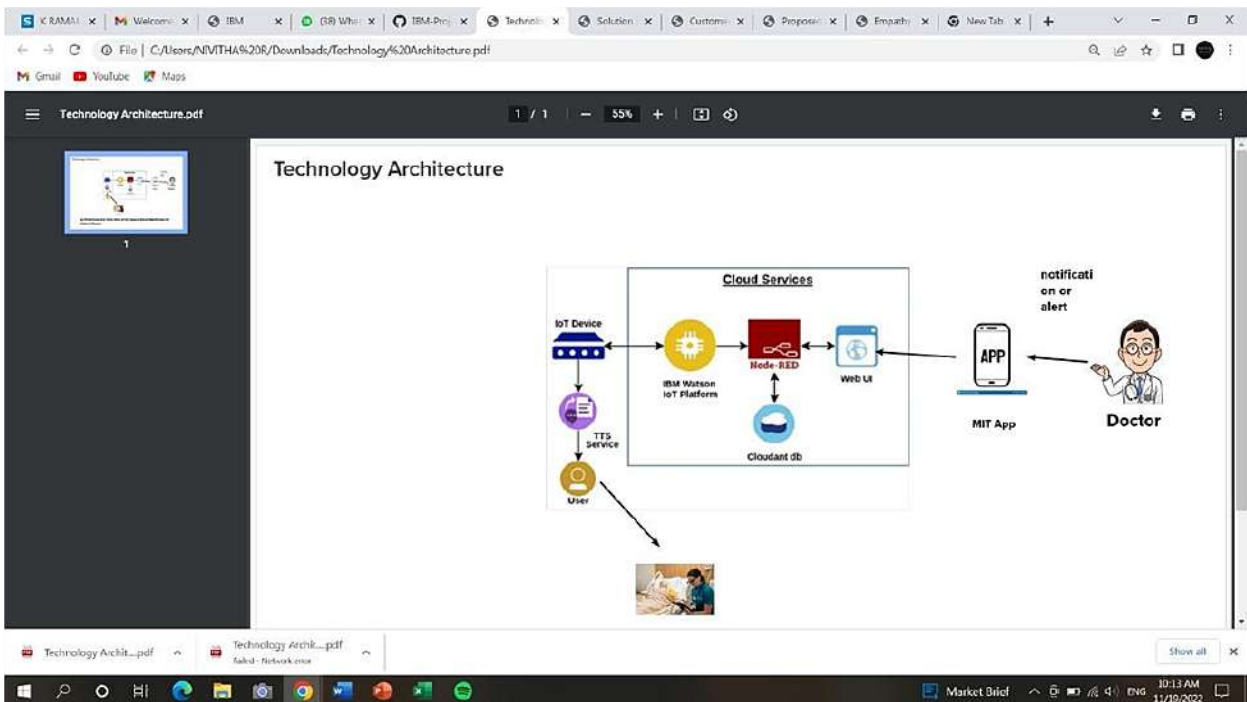
DATA FLOW DIAGRAM:



FUNCTIONAL REQUIRMENTS :

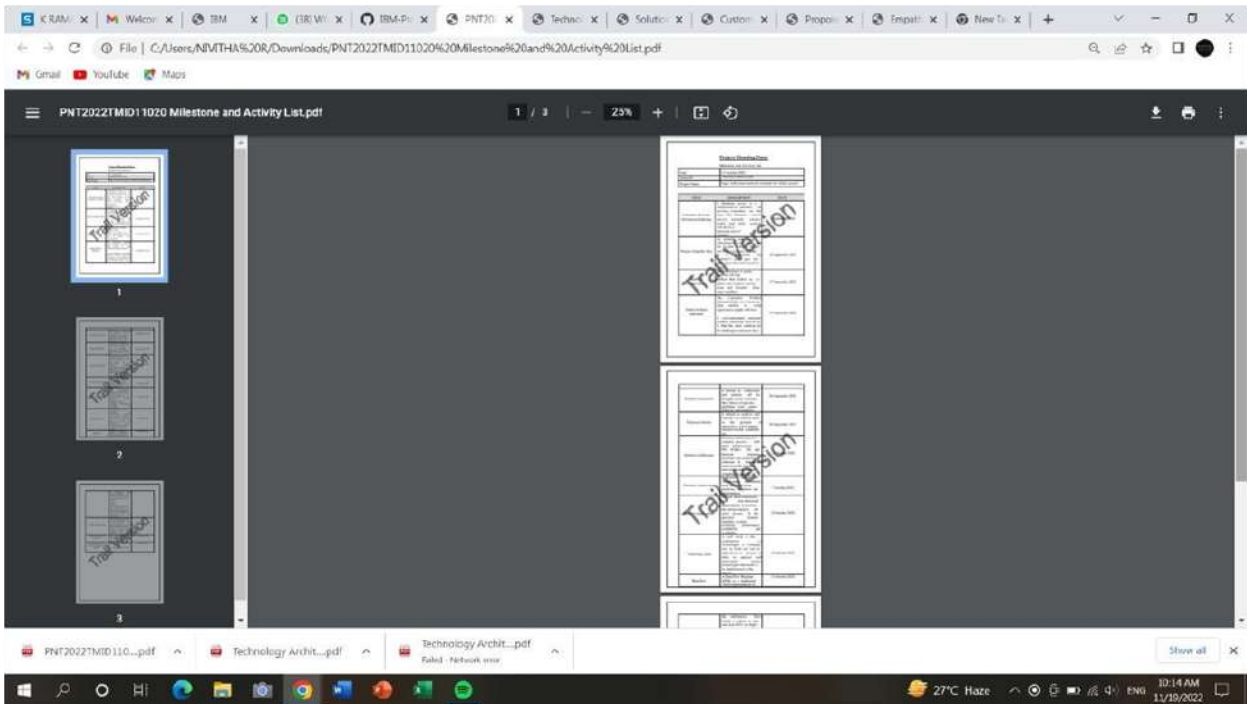


TECHNOLOGYARCHITECTURE:

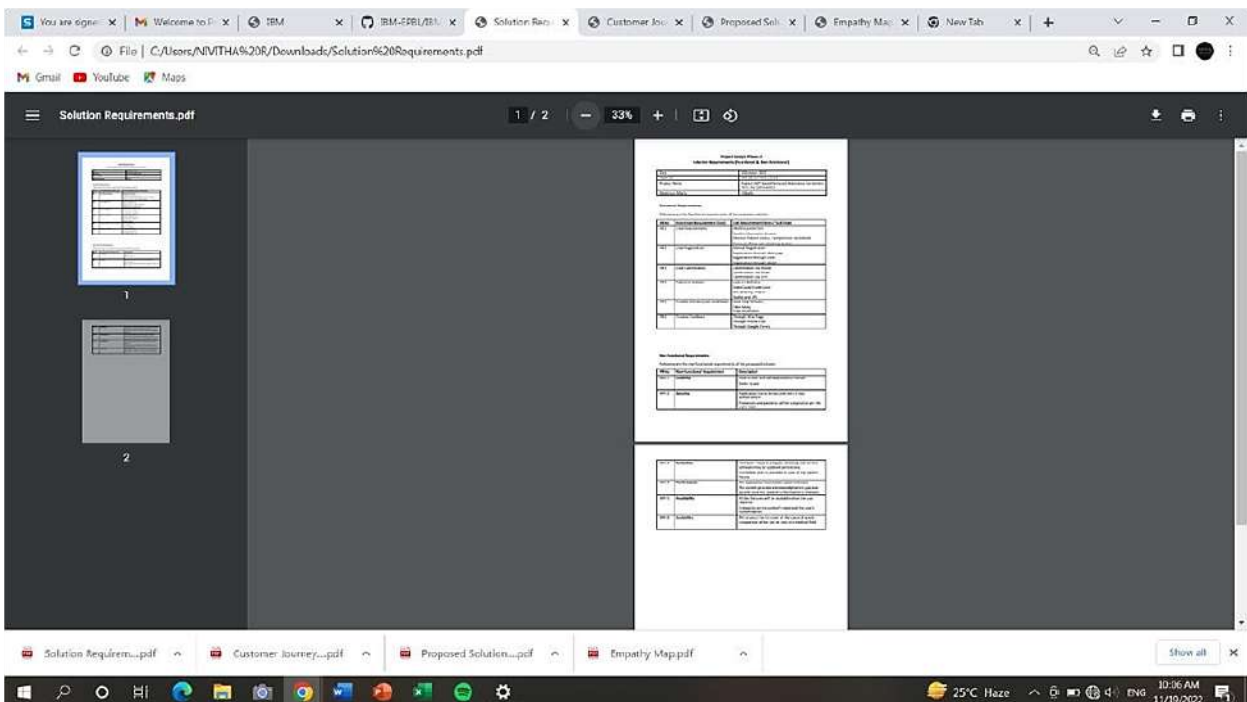


PROJECT PLANNING PHASE :

MILESTONE AND ACTIVITY LIST :

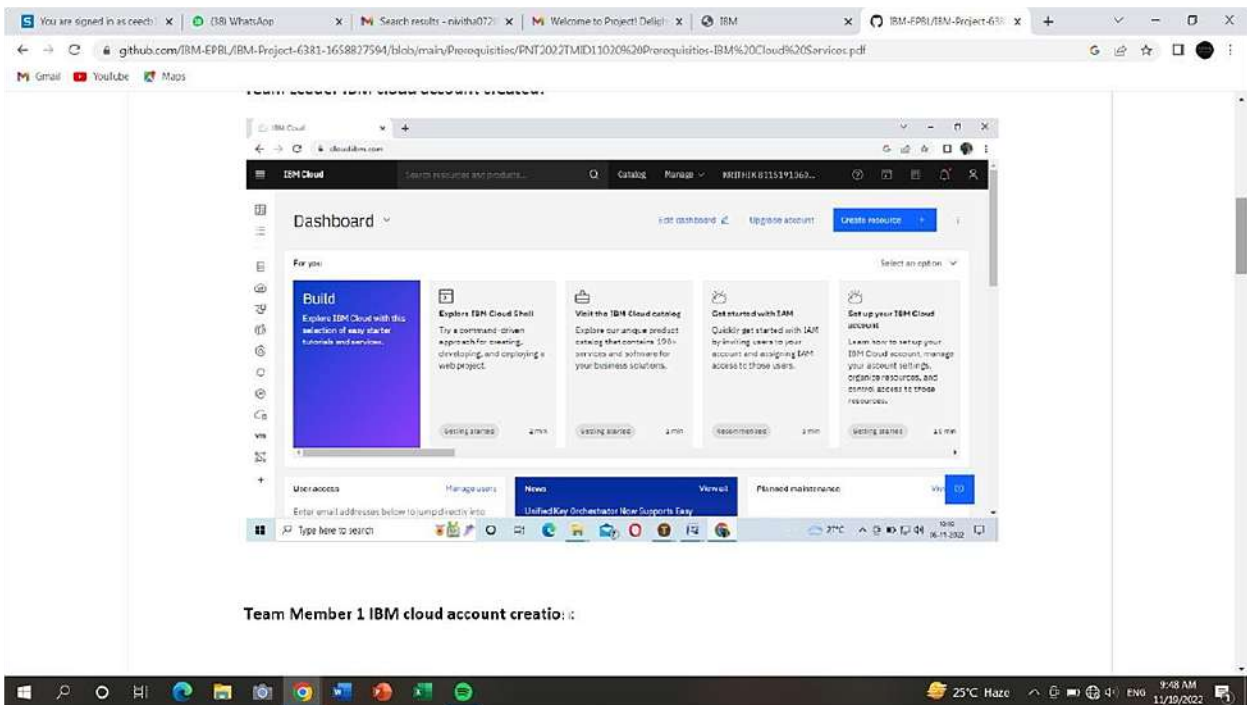


SPRINT DELIVERY PLAN :

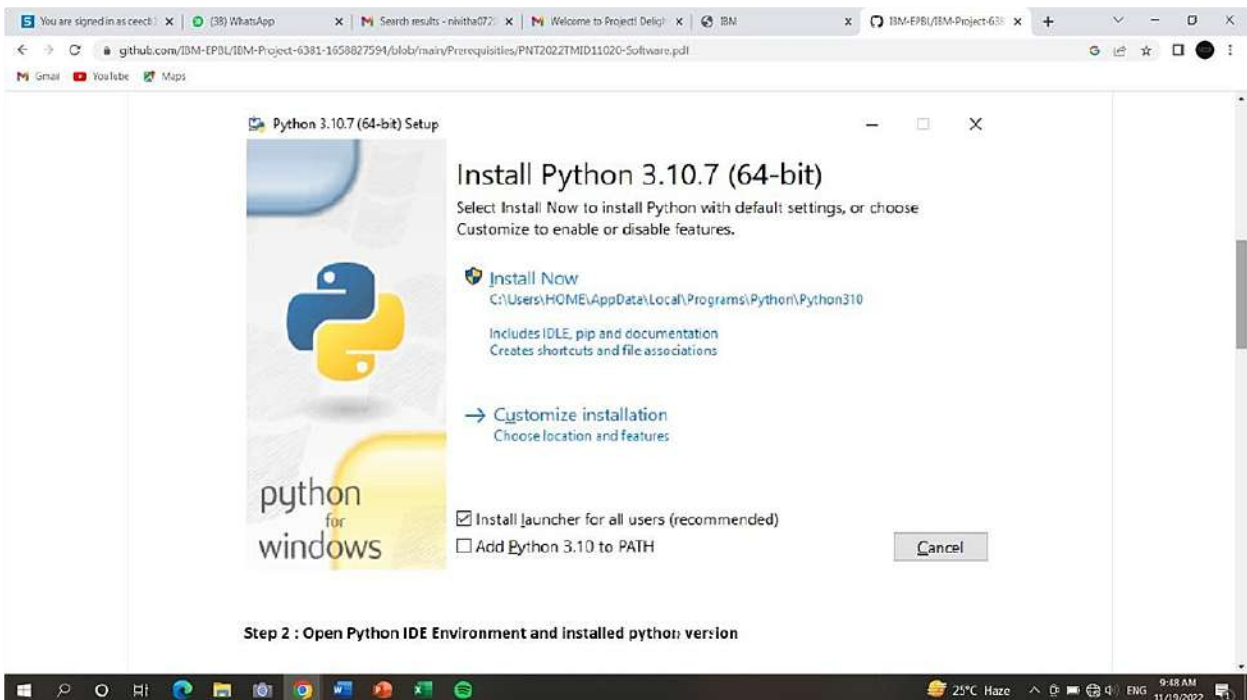


PREREQUISITES :

IBM CLOUD SERVICES:

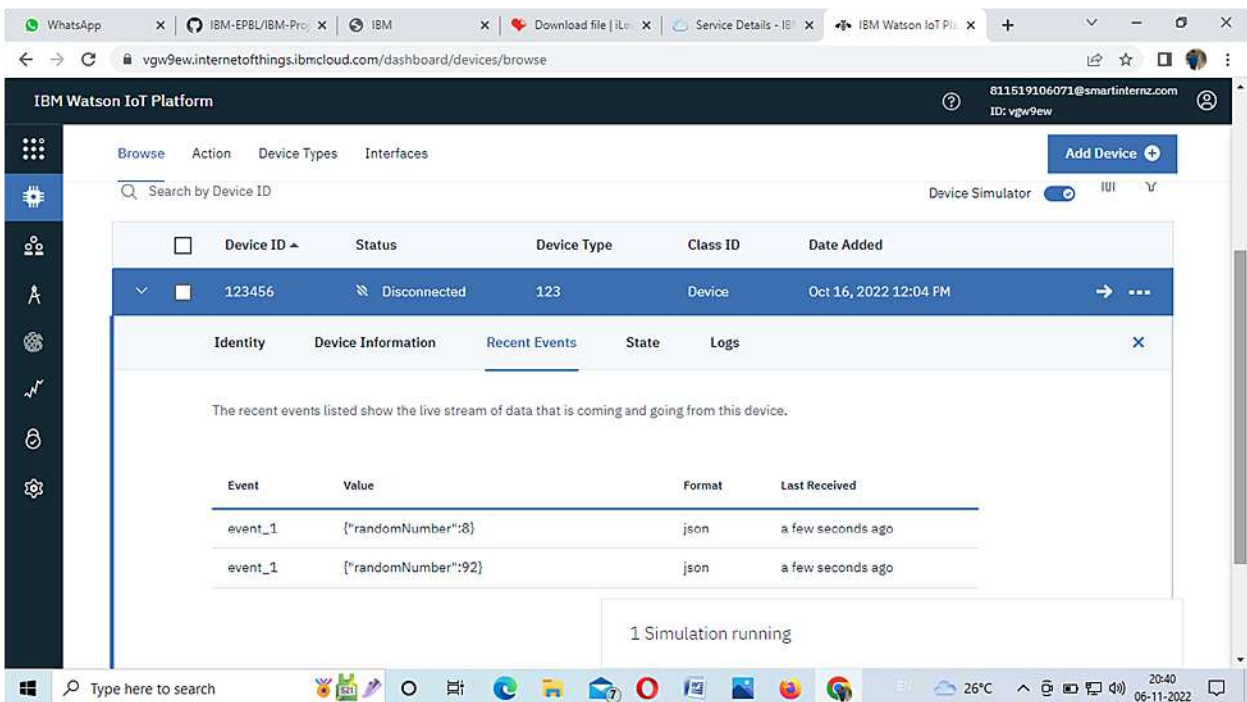
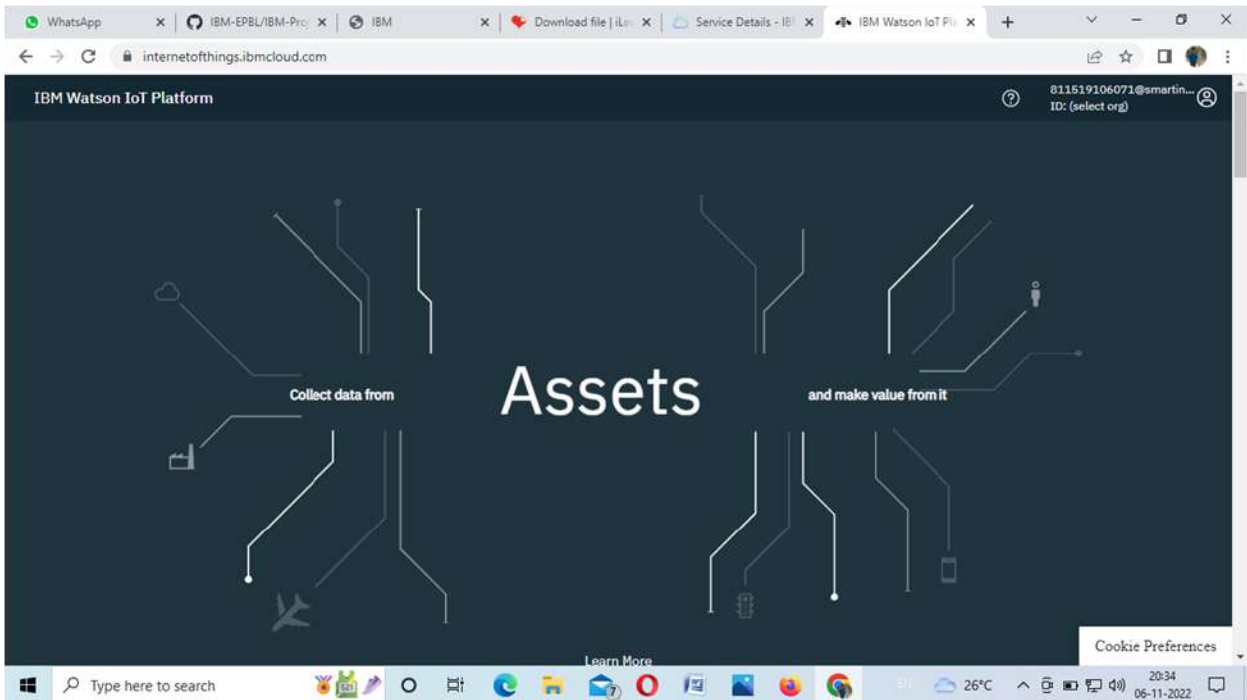


IBM SOFTWARE:



CREATE AND CONFIGURE IBM CLOUD SERVICES:

CREATE IBM WATSON AND ADD DEVICES:



CREATE A NODE RED SERVICE

```
node-red
Microsoft Windows [Version 10.0.19045.2193]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HOME>npm --version
8.19.2

C:\Users\HOME>npm install -g --unsafe-perm node-red
npm WARN deprecated @types/keyv@4.2.0: This is a stub types definition. keyv provides its own type definitions, so you do not need this installed.

changed 292 packages, and audited 293 packages in 29s

39 packages are looking for funding
  run 'npm fund' for details

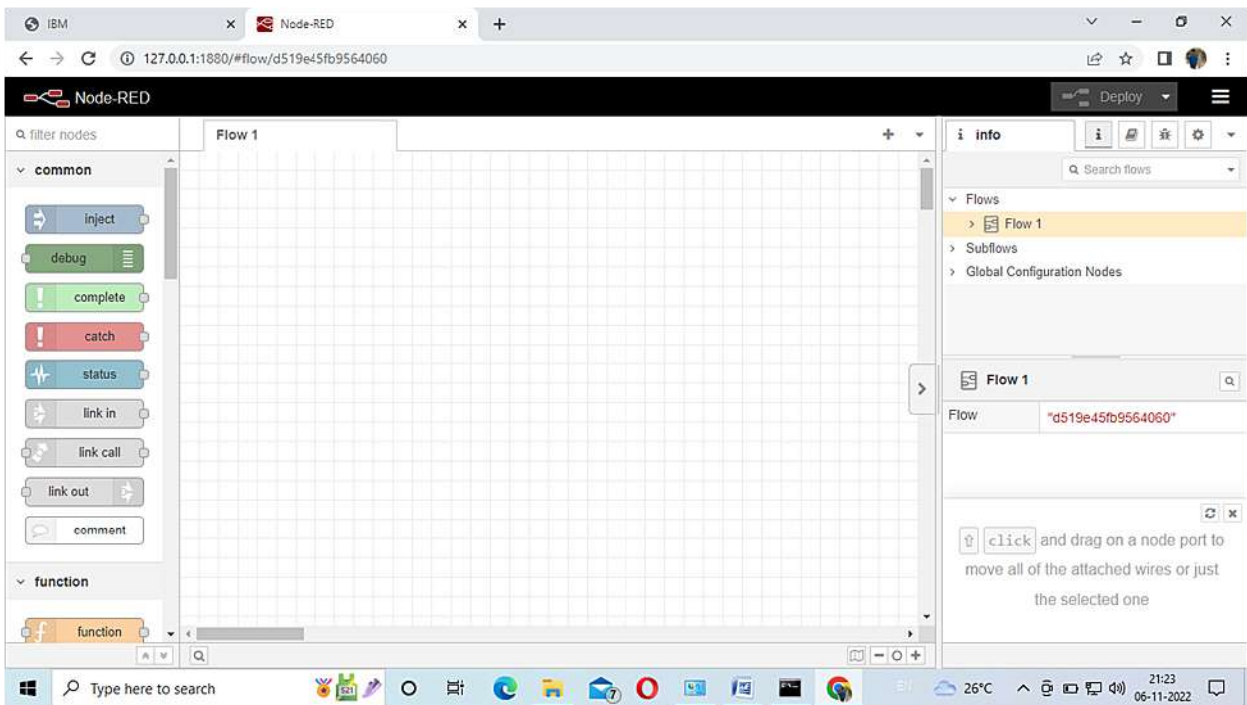
5 vulnerabilities (4 low, 1 moderate)

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run 'npm audit' for details.

C:\Users\HOME>node-red
6 Nov 21:15:16 - [info]
Welcome to Node-RED
=====
6 Nov 21:15:16 - [info] Node-RED version: v3.0.2
6 Nov 21:15:16 - [info] Node.js version: v19.0.0
6 Nov 21:15:16 - [info] Windows_NT 10.0.19045 x64 LE
6 Nov 21:15:17 - [info] Loading palette nodes
6 Nov 21:15:18 - [info] Settings file : C:\Users\HOME\.node-red\settings.js
6 Nov 21:15:18 - [info] Context store : 'default' [module-memory]
6 Nov 21:15:18 - [info] User directory : C:\Users\HOME\.node-red
6 Nov 21:15:18 - [warn] Projects disabled : editorTheme.projects.enabled=false
6 Nov 21:15:18 - [info] Flows file : C:\Users\HOME\.node-red\flows.json
6 Nov 21:15:18 - [info] Creating new flow file
6 Nov 21:15:18 - [warn]
```



CREATE A DATABASE USING CLOUDANT DB

IBM | Wc | IBM | Ser | x | No | Do | Inb | IS | Int | Pyt | Do | IBM | Nc | JSC | Do | Wi | IBM | Lo | +

bd3f4c36-da08-4490-bc03-3231e8cb42b0-bluemix.cloudant.com/dashboard.html

Databases

Database name

Create Database {} JSON

Your Databases

Name	Size	# of Docs	Partitioned
------	------	-----------	-------------

Log Out

Showing 1-0 of 0 databa

Create Database

Database: samples samples of sampler
sample

Partitioning

☒ Non-partitioned - recommended for most workloads

☐ Partitioned

> Which should I choose?

Cancel Create

Type here to search

24°C

22:04 18-11-2022

IBM | Wc | IBM | Ser | x | No | Do | Inb | IS | Int | Pyt | Do | IBM | Nc | JSC | Do | Wi | IBM | Lo | +




bd3f4c36-da08-4490-bc03-3231e8cb42b0-bluemix.cloudant.com/dashboard.html#/_all_dbs

Databases

Database name

Create Database {} JSON

Your Databases

Name	Size	# of Docs	Partitioned	Actions
sample	14 bytes	1	No	  

Log Out

Showing 1-1 of 1 databases. Databases per page 20

Type here to search

24°C

22:05 18-11-2022

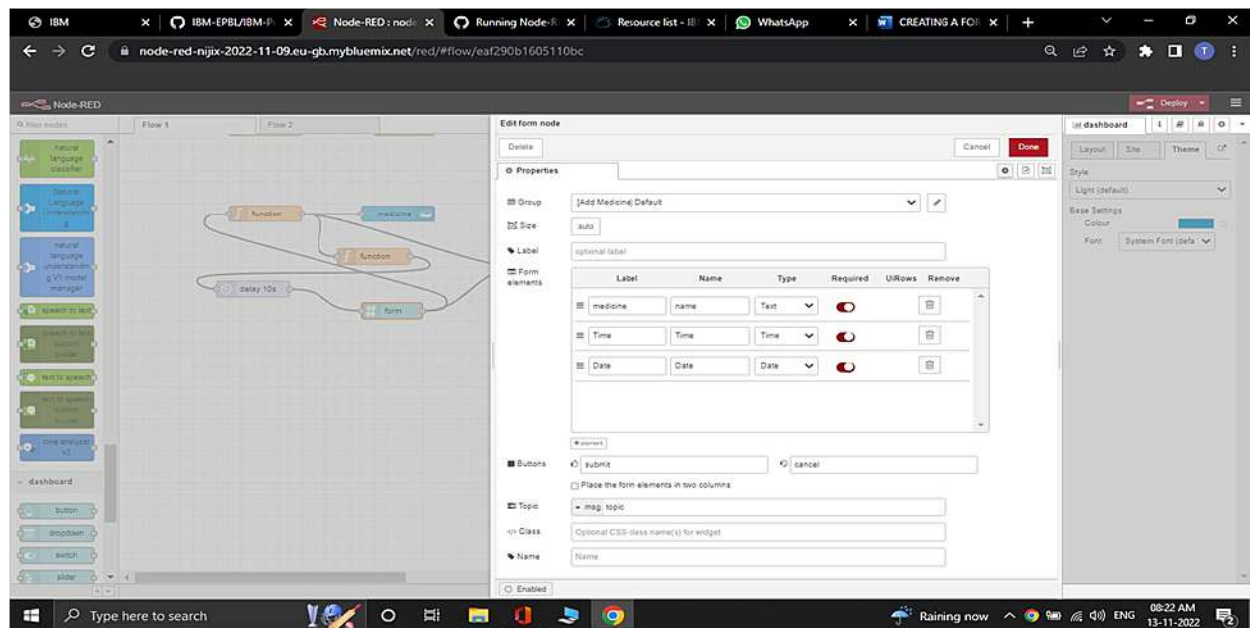
CREATE A TEXT TO SPEECH SERVICE

IBM Cloud console interface showing the 'Text to Speech-1f' service page. The page title is 'Text to Speech-1f' with a status of 'Active'. The main content area is titled 'Getting started with Text to Speech' and includes a video player. The sidebar on the left shows navigation options: 'Manage', 'Getting started', 'Service credentials', 'Plan', and 'Connections'. The top navigation bar includes 'Catalog', 'Manage', and a user profile 'KRITHIK 8115191060...'. The bottom status bar shows the date '18-11-2022' and time '19:55'.

IBM Cloud console interface showing the 'Text to Speech-1f' service page, specifically the 'Service credentials' section. The page title is 'Text to Speech-1f' with a status of 'Active'. The main content area is titled 'Service credentials' and includes a table with one item selected: 'Auto-generated service credentials' with a date of '2022-11-18 7:55 PM'. The sidebar on the left shows navigation options: 'Manage', 'Getting started', 'Service credentials', 'Plan', and 'Connections'. The top navigation bar includes 'Catalog', 'Manage', and a user profile 'KRITHIK 8115191060...'. The bottom status bar shows the date '18-11-2022' and time '19:55'.

DEVELOPING A WEB APPLICATION USING NODE RED SERVICE

CREATE A FORM



WRITE A FUNCTION TO COMPARE TIME

