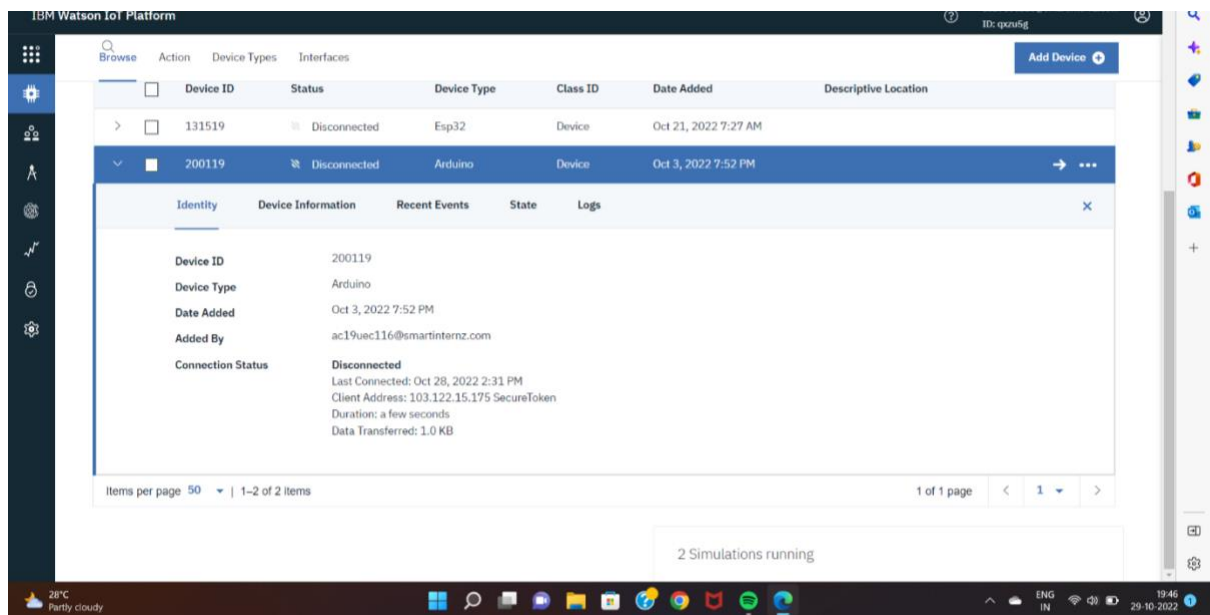


Sprint-4

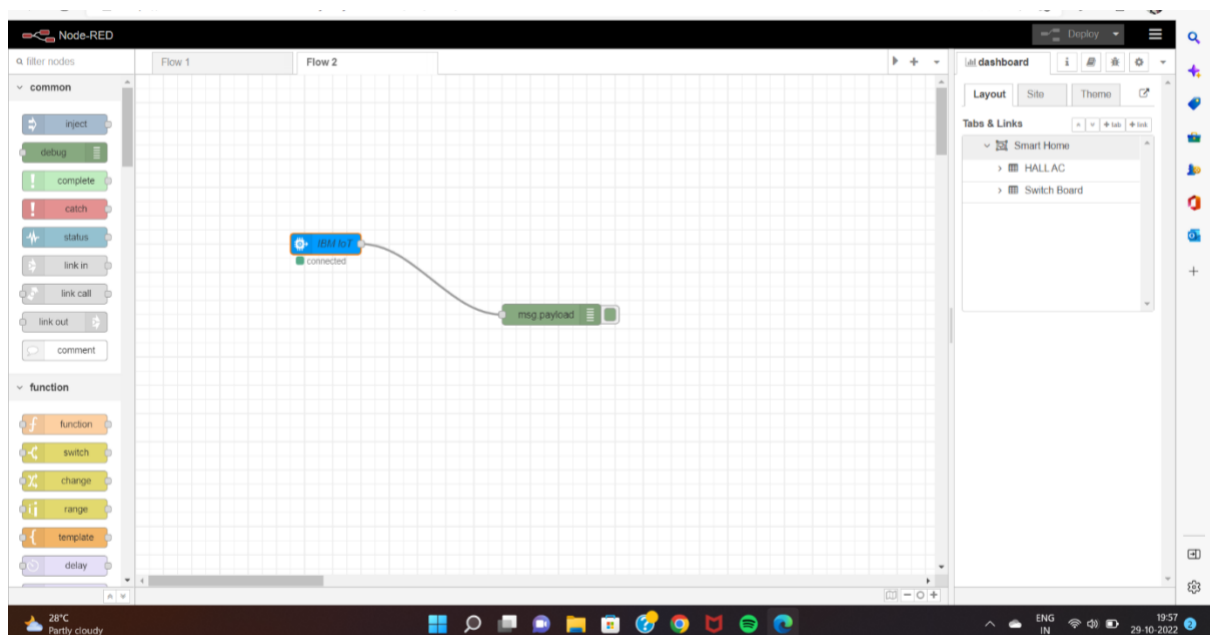
Date	13 November 2022
Team ID	PNT2022TMID08180
Project Name	Personal Assistance for Seniors Who Are Self-Reliant
Maximum Marks	4 Marks

Overall View

1.Creating IBM Watson IOT Platform and device



2.Creating Node-RED Service



3. Creating Text to Speech Service

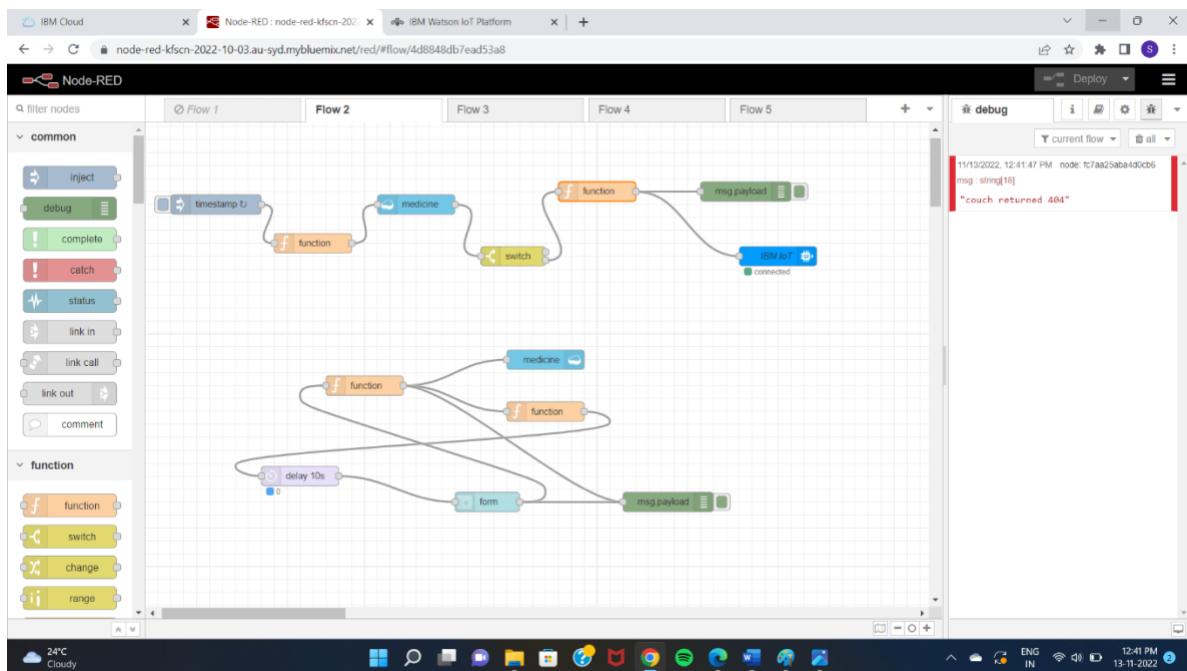
The screenshot shows the IBM Cloud console for the 'Text to Speech-zx' service. The interface includes a top navigation bar with the IBM Cloud logo, a search bar, and user account information. The main content area is divided into a left sidebar with 'Manage' options (Getting started, Service credentials, Plan, Connections) and a main panel. The main panel has a 'Start by viewing the tutorial' section with links to 'Getting started tutorial' and 'API reference'. Below this is a 'Credentials' section with fields for 'API key' and 'URL'. The 'API key' field is masked with dots, and the 'URL' field contains the endpoint 'https://api.eu-de.text-to-speech.watson.cloud.ibm.com/instances/'. To the right, there is a 'Plan' section showing 'Lite' and an 'Upgrade' button. The bottom of the screen shows a Windows taskbar with various application icons and system status information.

4. Creating a Database in Cloudant DB

The screenshot shows the Cloudant Databases console. The top navigation bar includes a 'Databases' header, a 'Database name' dropdown, and buttons for 'Create Database', 'JSON', and a bell icon. The main content area displays a table of databases under the heading 'Your Databases'. The table has columns for 'Name', 'Size', '# of Docs', 'Partitioned', and 'Actions'. Three databases are listed: 'medicine' (26 bytes, 1 doc, not partitioned), 'noderedhnepa20221003' (2.3 KB, 2 docs, not partitioned), and 'noderedkfscn20221003' (30.6 KB, 4 docs, not partitioned). Each database has three action icons: a plus sign, a lock, and a trash can. The bottom of the screen shows a Windows taskbar with various application icons and system status information.

Name	Size	# of Docs	Partitioned	Actions
medicine	26 bytes	1	No	[+][lock][trash]
noderedhnepa20221003	2.3 KB	2	No	[+][lock][trash]
noderedkfscn20221003	30.6 KB	4	No	[+][lock][trash]

5. Node-RED Flow



6. Updating Medicine details in the Form which is available in Web UI

The image shows a web application titled 'Medicine_Reminder'. The main heading is 'Medicine_UI'. Below the heading, there is a form with the following fields: 'Enter the Medicine *' with the value 'Azithromycin', 'Time(HH:mm)24hrs *' with the value '12:44', and 'Date(MM-yyyy) *' with the value '13-11-2022'. At the bottom of the form, there are two buttons: 'SUBMIT' and 'RESET'.

7. Displaying the Medicine name in the Debug Message at intake time which was uploaded in the Form

The screenshot shows the Node-RED web interface. A flow is visible with nodes: inject, timestamp, function, medicine, switch, function, delay 10s, form, and msg.payload. The debug console on the right shows the following messages:

```
11/13/2022, 12:41:47 PM node:fc7aa25baa4d0cb6
msg: string[16]
" Couch returned 404"

11/13/2022, 12:42:58 PM node:5e8e5274b0b794e
msg: payload: Object
{ name: "Azithromycin", time: "12:44", date: "13-11-2022" }

11/13/2022, 12:42:59 PM node:5e8e5274b0b794e
msg: payload: Object
{ _id: "13-11-2022 12:44", name: "Azithromycin" }

11/13/2022, 12:42:47 PM node:fc7aa25baa4d0cb6
msg: string[16]
" Couch returned 404"

11/13/2022, 12:43:47 PM node:fc7aa25baa4d0cb6
msg: string[16]
" Couch returned 404"

11/13/2022, 12:44:47 PM node:2763d33b68c2eef0
msg: string[16]
" Command": "Azithromycin"

11/13/2022, 12:45:47 PM node:fc7aa25baa4d0cb6
msg: string[16]
" Couch returned 404"
```

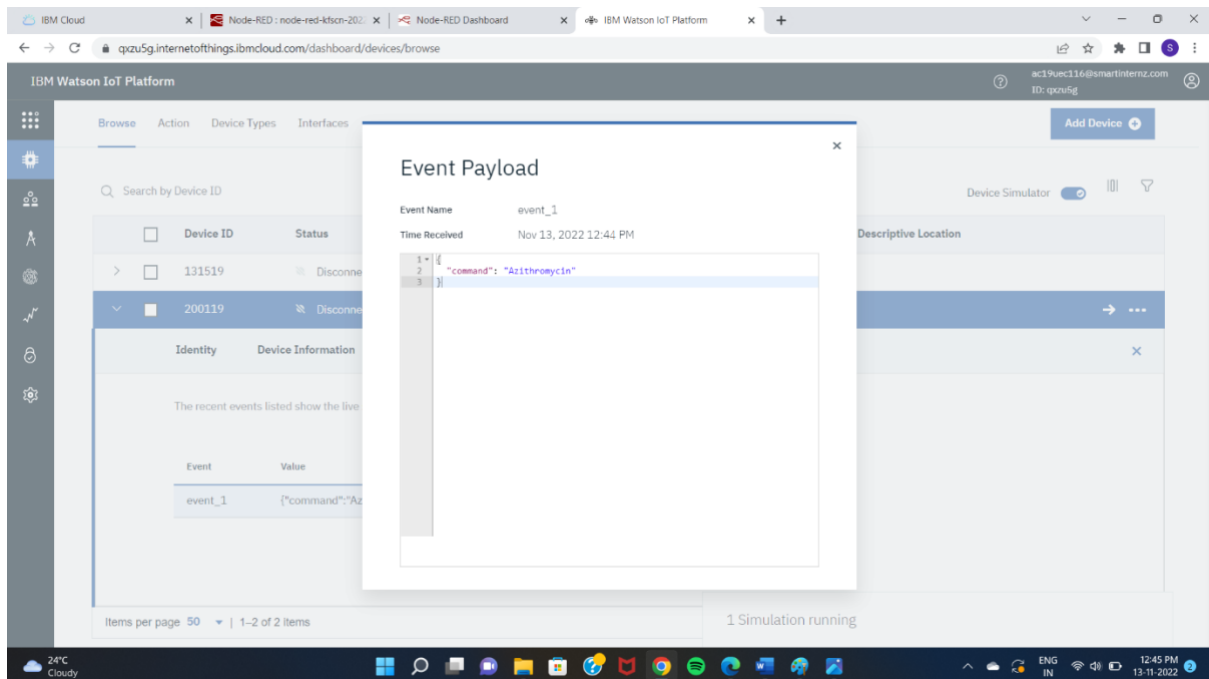
8. At desired time the medicine name is sent to IOT device in the IBM IOT Platform

The screenshot shows the IBM Watson IoT Platform dashboard. The 'Recent Events' tab is selected, showing a table of events:

Event	Value	Format	Last Received
event_1	{ "command": "Azithromycin" }	json	a few seconds ago

Below the table, it indicates '1 Simulation running'.

9.Event Payload in IBM Watson IOT platform



The screenshot shows the IBM Watson IoT Platform interface. A modal window titled "Event Payload" is open, displaying the following information:

- Event Name: event_1
- Time Received: Nov 13, 2022 12:44 PM
- Event Payload (JSON):

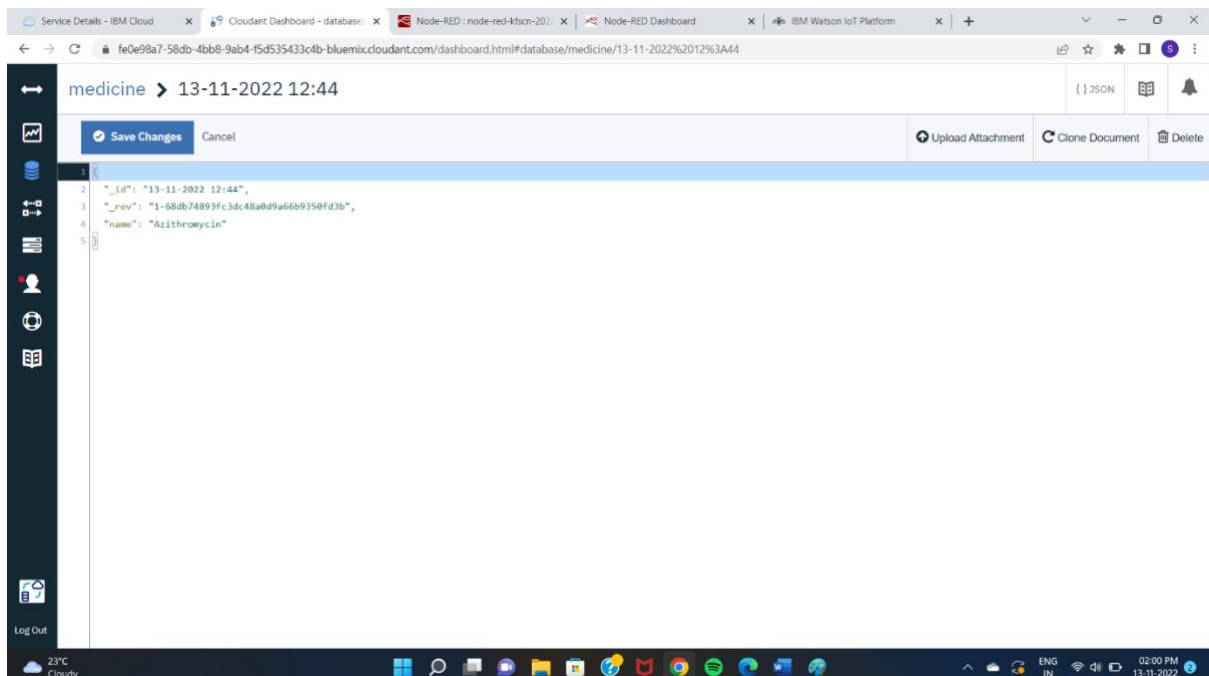
```
{  "command": "Azithromycin"}
```

The background interface shows a list of devices with IDs 131519 and 200119, both marked as "Disconnected". A table at the bottom shows the event details:

Event	Value
event_1	{"command": "Azithromycin"}

The status bar at the bottom indicates "1 Simulation running".

10.Medicine name Stored in database as



The screenshot shows the IBM Cloudant Dashboard interface. The URL bar indicates the database path: `fe0e98a7-58db-4bb8-9ab4-f5d535433c4b-blueimix.cloudant.com/dashboard.html#database/medicine/13-11-2022%2012%3A44`. The page title is "medicine > 13-11-2022 12:44".

The record details are as follows:

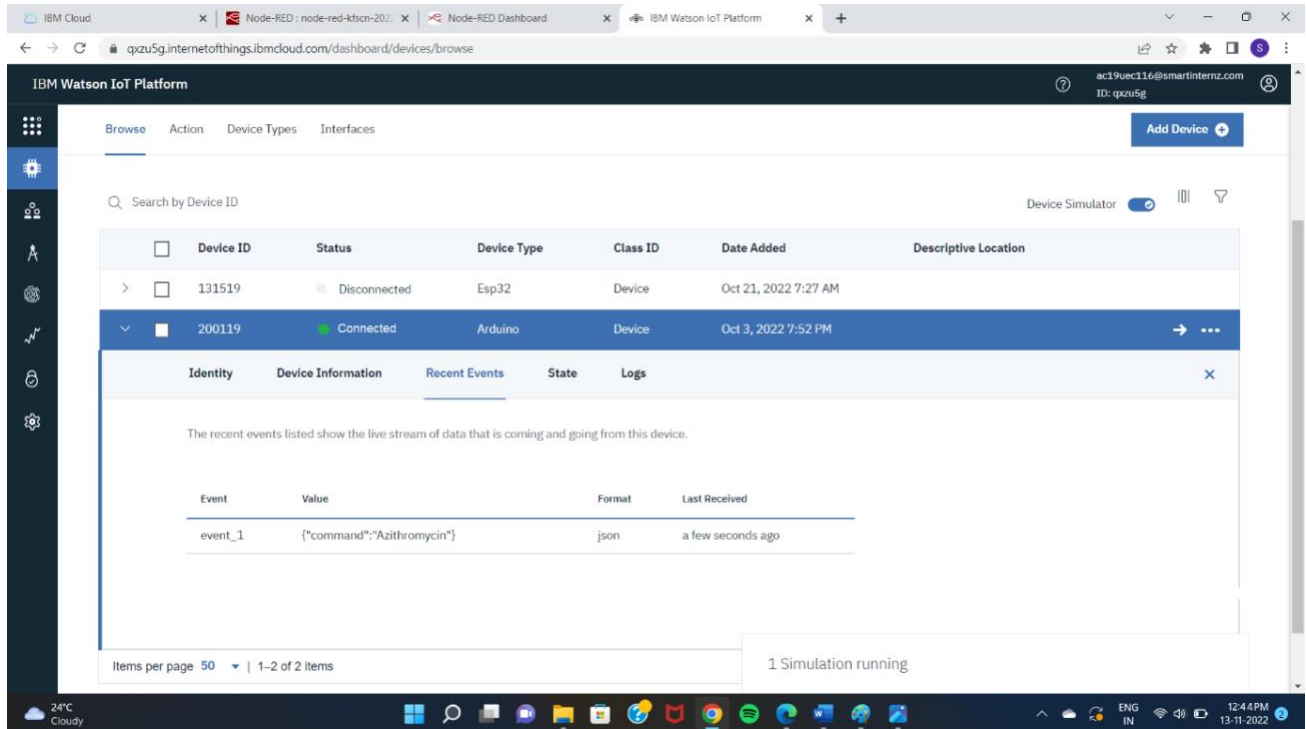
- Save Changes (button)
- Cancel (button)
- Upload Attachment (button)
- Clone Document (button)
- Delete (button)

The record content is displayed in a JSON format:

```
{  "_id": "13-11-2022 12:44",  "_rev": "1-68db74893fc3dc48a0d9a66b9350fd3b",  "name": "Azithromycin"}
```

The status bar at the bottom indicates "23°C Cloudy".

11. At desired time the medicine name has been send to IOT device in the IBM IOT Platform



The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. Below the navigation bar, there is a table of devices. The table has columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. Two devices are listed: 131519 (Disconnected, Esp32) and 200119 (Connected, Arduino). The device 200119 is selected, and its details are shown in a modal window. The modal has tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a table of events. The table has columns: Event, Value, Format, and Last Received. One event is listed: event_1 with the value '{"command": "Azithromycin"}' in json format, received a few seconds ago. The bottom status bar shows '1 Simulation running'.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
131519	Disconnected	Esp32	Device	Oct 21, 2022 7:27 AM	
200119	Connected	Arduino	Device	Oct 3, 2022 7:52 PM	

Event	Value	Format	Last Received
event_1	{"command": "Azithromycin"}	json	a few seconds ago

12. Python script to subscribe to the IBM IoT platform & Generate voice alerts

```
python script.py - C:\Users\three\AppData\Local\Programs\Python\Python37\python script.py (3.7.0)
File Edit Format Run Options Window Help

import time
import sys
import ibmiotf.application
import ibmiotf.device
import IAMAuthenticator

#Provide your IBM Watson Device Credentials
organization = "qxzu5g"
deviceType = "Arduino"
deviceId = "200119"
authMethod = "token"
authToken = "1910231709"

authenticator = IAMAuthenticator('ecfoDiyoaIuYMB@g_a4PRDrqzoRRqnoFAYmuCoCNVFGn')
text_to_speech = TextToSpeechV1(
    authenticator=authenticator
)

text_to_speech.set_service_url('https://api.eu-de.text-to-speech.watson.cloud.ibm.com/instances/508c5a8d-2a16-4716-98e3-e4c820611ecf')

print("Medicine time....")
time.sleep(1)

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    #.....

except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()

deviceClient.connect()
while True:
    #Get events from ibm iot
    def myEventCallback(event):
        str = "%s event '%s' received from device [%s]: %s"
        print(str % (event.eventId, event.device, json.dumps(event.data)))

    success = deviceClient.subscribeToDeviceEvents("IoTSensor", "json", data, qos=0, on_event=myEventCallback)
    if not success:
        print("Not connected to IoT")
        time.sleep(1)
    deviceClient.deviceEventCallback = myEventCallback
# Disconnect the device and application from the cloud
deviceClient.disconnect()
```

13. Python Script Output, which displays the medicine name received by IOT device in the IBM IOT Platform



The screenshot shows a Python 3.7.0 Shell window with the following output:

```
Python 3.7.0 (tags/v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:\Users\shree\AppData\Local\Programs\Python\Python37\pro.py ===
Medicine time...
JSON event event_1 received from device [Arduino]: 'command' : 'Azithromycin'
```

The window title is "Python 3.7.0 Shell". The status bar at the bottom shows "Ln: 12 Col: 4". The Windows taskbar at the bottom indicates the system time is 12:45 PM on 13-11-2022, with a temperature of 22°C and a cloudy sky.

Thus Medicine Name would given as voice alert with the help of TTS Service.