PROJECT DEVELOPMENT PHASE

DELIVERY OF SPRINT 2

Date	11th November 2022
Team ID	PNT2022TMID24214
Project Name	Personal Assistance for senior citizens who are self-reliant

SPRINT II: Development of Web User Interface in NodeRED service of IBM
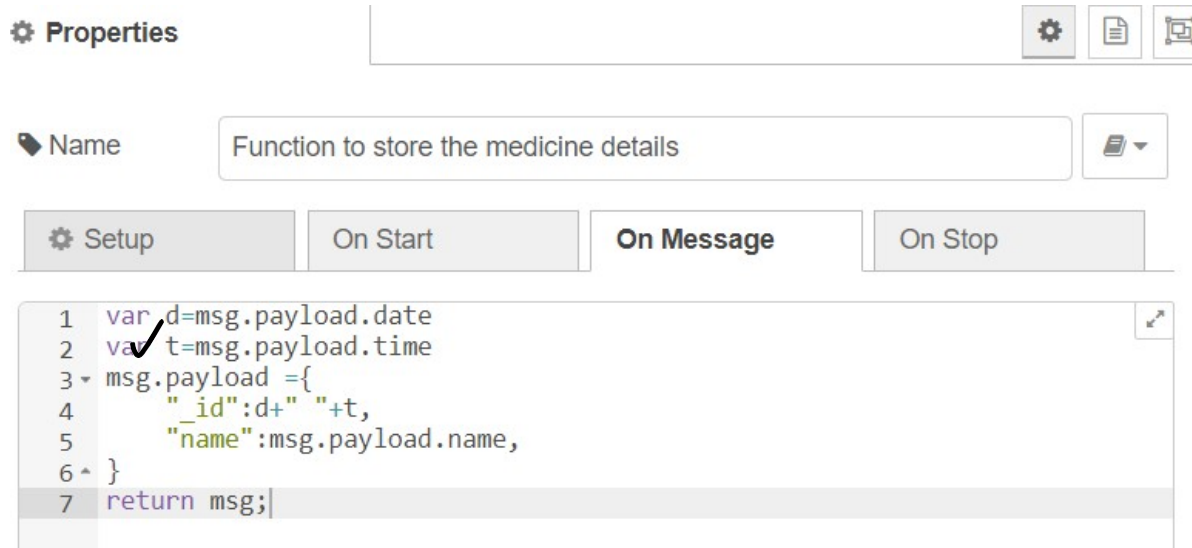
Outline of Sprint 2

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.

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration. Creation of IBM services like NodeRED, Cloudant DB, TTS Service and design of IoT system	USN-1	As a user, I must be able to login to the IBM platform	2	High	Gurubaran, Arunkumar
Sprint-2	Web UI. Creation of Web UI using NodeRED service	USN-2	As a user, I must be able to update the medicine details in the web UI	2	High	Vinothagan, Mejalin Arno
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 be push the details to the IoT device	2	High	Gurubaran, Mejalin Arno
Sprint-4	Final demonstration and user testing. Generating voice commands using IBM Text to Speech service	USN-4	As a user, I must be able hear the medicine name which is to be taken at the appropriate time and check its accuracy	2	High	Vinothagan, Arunkumar

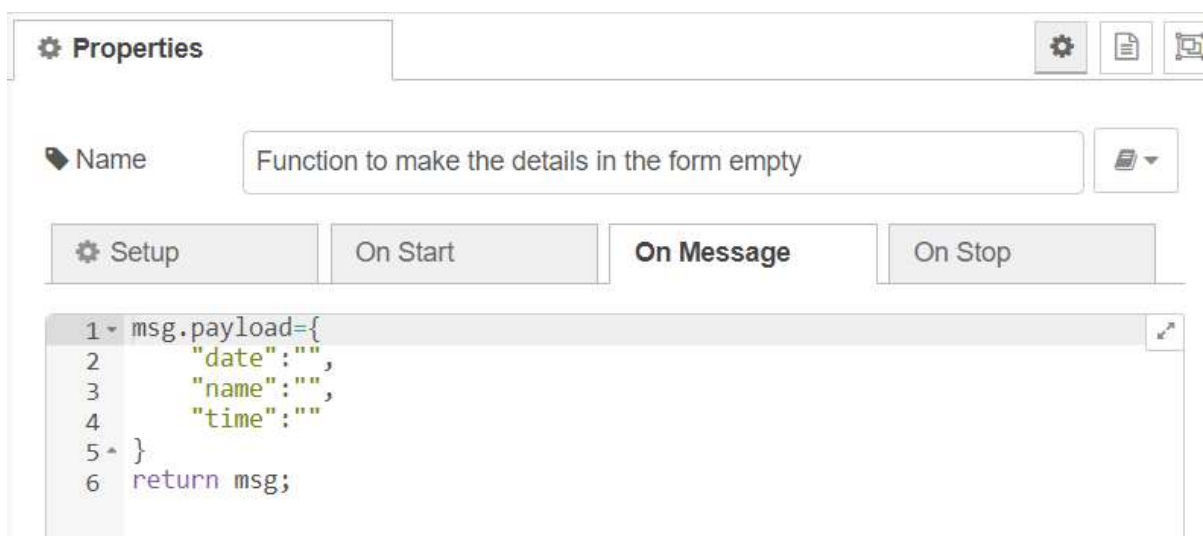**1) To create a form dashboard to enter the medicine details.**

- The Web UI could be accomplished by creating a form by installing nodered dashboard in the manage palate option of the NodeRED platform
- Form allows the user to enter the medicine name, time in which the medicine has to be taken and the day.
- The medicine details entered in the form are stored in the cloudant db database service of the IBM by writing a suitable function

---

⚙ **Properties**

🏷 Name   Function to store the medicine details

| ⚙ Setup | On Start | **On Message** | On Stop |

```
1   var d=msg.payload.date
2   var t=msg.payload.time
3 ▾ msg.payload ={
4       "_id":d+" "+t,
5       "name":msg.payload.name,
6 ▴ }
7   return msg;
```
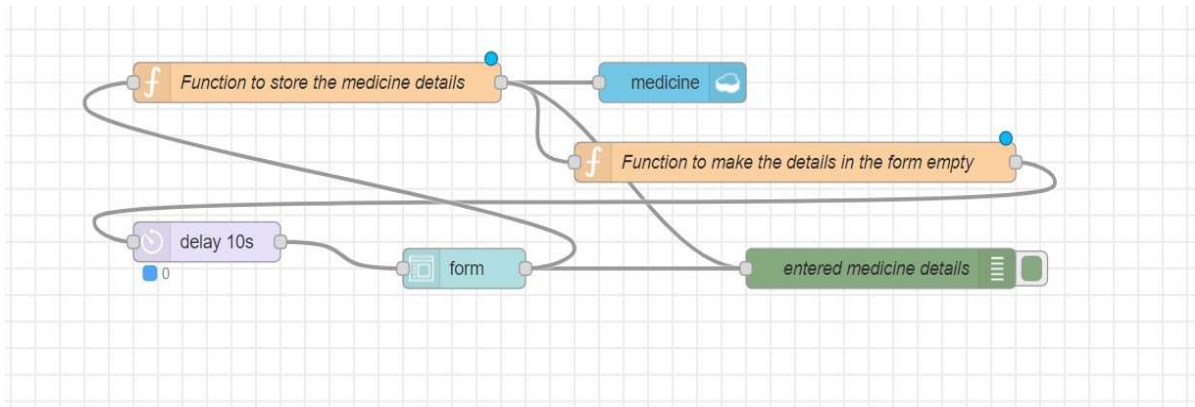
- Another function is written to make the contents of the form empty after a delay to facilitate the entry of the other medicine details

---

⚙ **Properties**

🏷 Name   Function to make the details in the form empty

| ⚙ Setup | On Start | **On Message** | On Stop |

```
1 ▾ msg.payload={
2       "date":"",
3       "name":"",
4       "time":""
5 ▴ }
6   return msg;
```

- Node flow for the creation of the form

- UI for entering the medicine details

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

- To accomplish this we need to write a function to compare the present time with the time entered in the form.
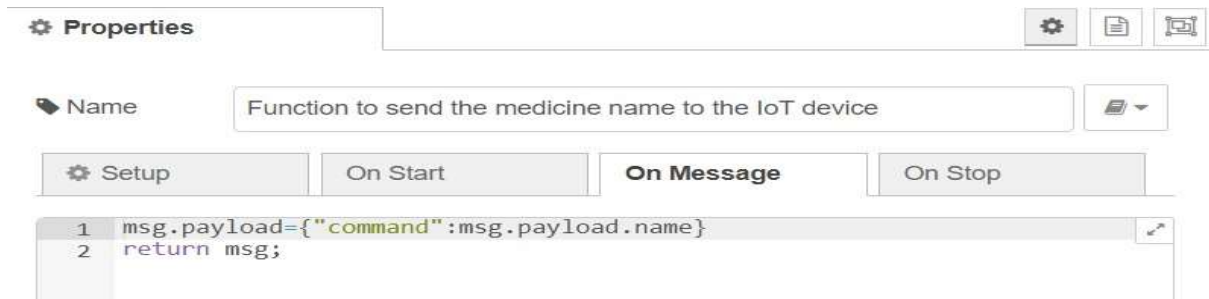- The following function will obtain the present time


```
1  var d=new Date();
2  var utc= d.getTime()+ (d.getTimezoneOffset()*60000);
3  var offset= 5.5;
4  newDate= new Date(utc + (3600000*offset));
5  var n=newDate.toISOString()
6  var date = n.slice(0, 10)
7  var time = n.slice(11,16)
8  global.set('time', time)
9  msg.payload=date+" "+time
10 return msg
```

- After obtaining the present time, cloudant in node is connected to it in order facilitate searching by _id
- If the present time and time in the database matches, then the name of the medicine will be sent to the IoT device using switch node and function following that node

Properties

Name: Function to send the medicine name to the IoT device

| Setup | On Start | **On Message** | On Stop |

```
1  msg.payload={"command":msg.payload.name}
2  return msg;
```

- Node flow for sending the name of the medicine to the IoT device
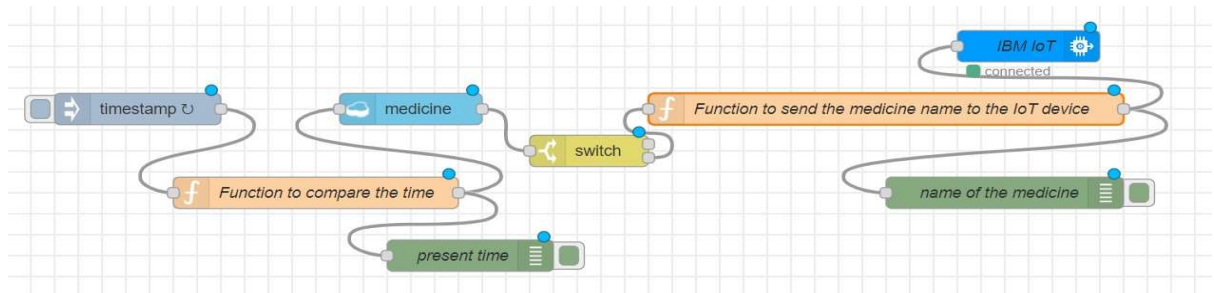
3)Total node flow of the entire Web UI
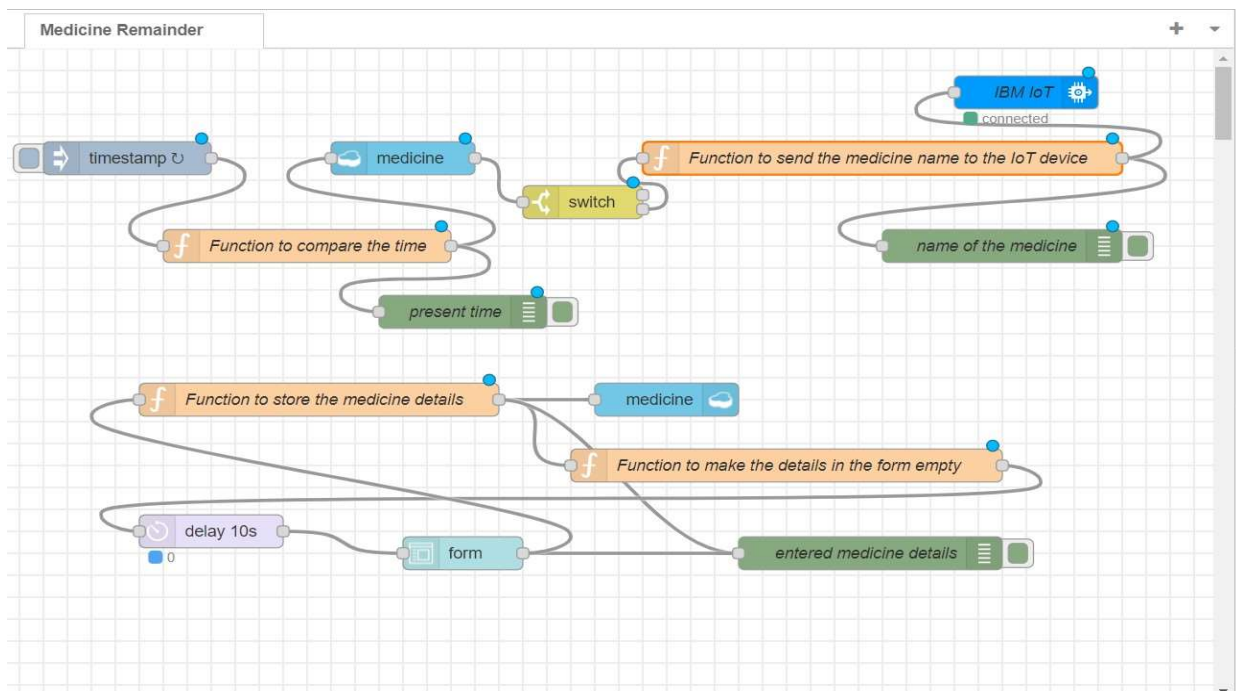
4)After deploying the following are the results

- The following image shows the details of the medicine entered

- The following image shows the details of the medicine which is stored in the cloudant db under the medicine database

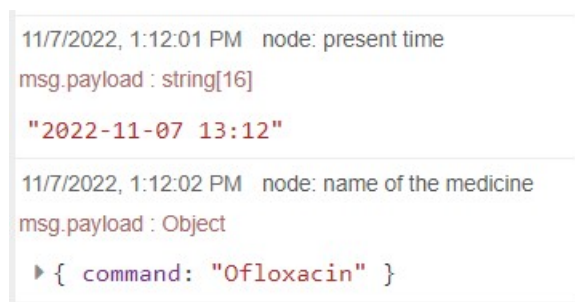- The following image shows the details of the medicine in the medicine database in JSON format

- The following image shows the name of the medicine which is sent to the IoT device at the prescribed time
- The medicine name Ofloxacin is sent to the IoT device as a command at the time 1:12PM

- The medicine name Itraconazole is sent to the IoT device as a command at the time 1:14PM