

PROJECT DEVELOPMENT PHASE
DELIVERY OF SPRINT 2

Date	06 November 2022
Team ID	PNT2022TMID11112
Project Name	Project – Personal Assistance for senior citizens who are self-reliant
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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.

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

The screenshot shows the NodeRED interface for a function node. The 'Properties' tab is active, showing the node name 'Function to store the medicine details'. The 'On Message' tab is selected, displaying a JavaScript function that extracts 'date' and 'time' from the message payload and stores them in a new payload object along with the original 'name'.

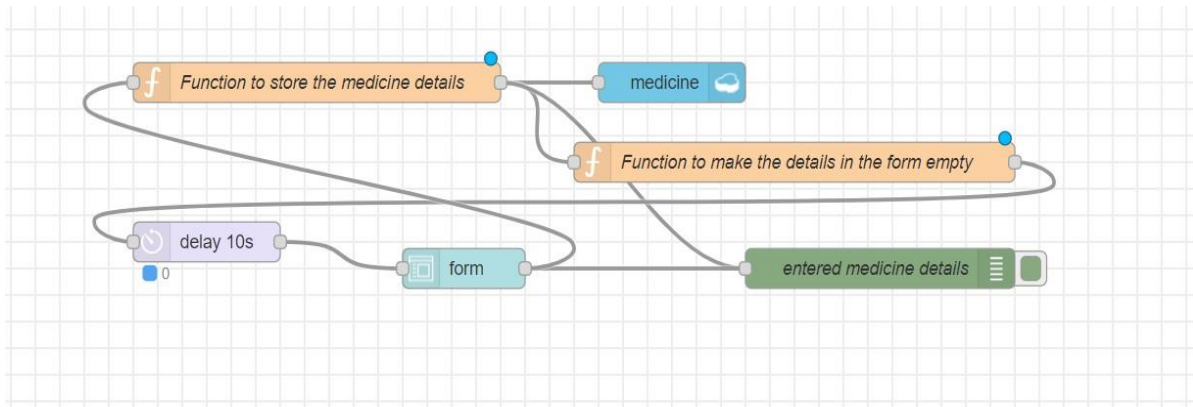
```
1 var d=msg.payload.date
2 var t=msg.payload.time
3 msg.payload={
4   "_id":d+" "+t,
5   "name":msg.payload.name,
6 }
7 return msg;
```

- Another function is written to make the contents of the form empty after a delay to facilitate the entry of the other medicine details

The screenshot shows the NodeRED interface for a function node. The 'Properties' tab is active, showing the node name 'Function to make the details in the form empty'. The 'On Message' tab is selected, displaying a JavaScript function that resets the 'date', 'name', and 'time' fields of the message payload to empty strings.

```
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

Medicine Remainder

Medicine Remainder

Enter the name of the Medicine *

Enter the Time(HH:MM) *

Enter the Date(YYYY-MM-DD) *

SUBMIT

CANCEL

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

⚙️ Properties

⚙️

📄

🔗

📁 Name

Function to compare the time

📄

⚙️ Setup

On Start

On Message

On Stop

```
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

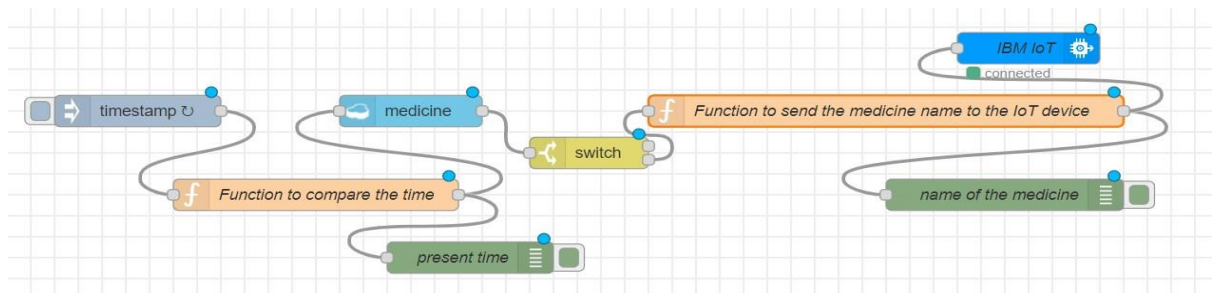
Setup On Start **On Message** On Stop

```

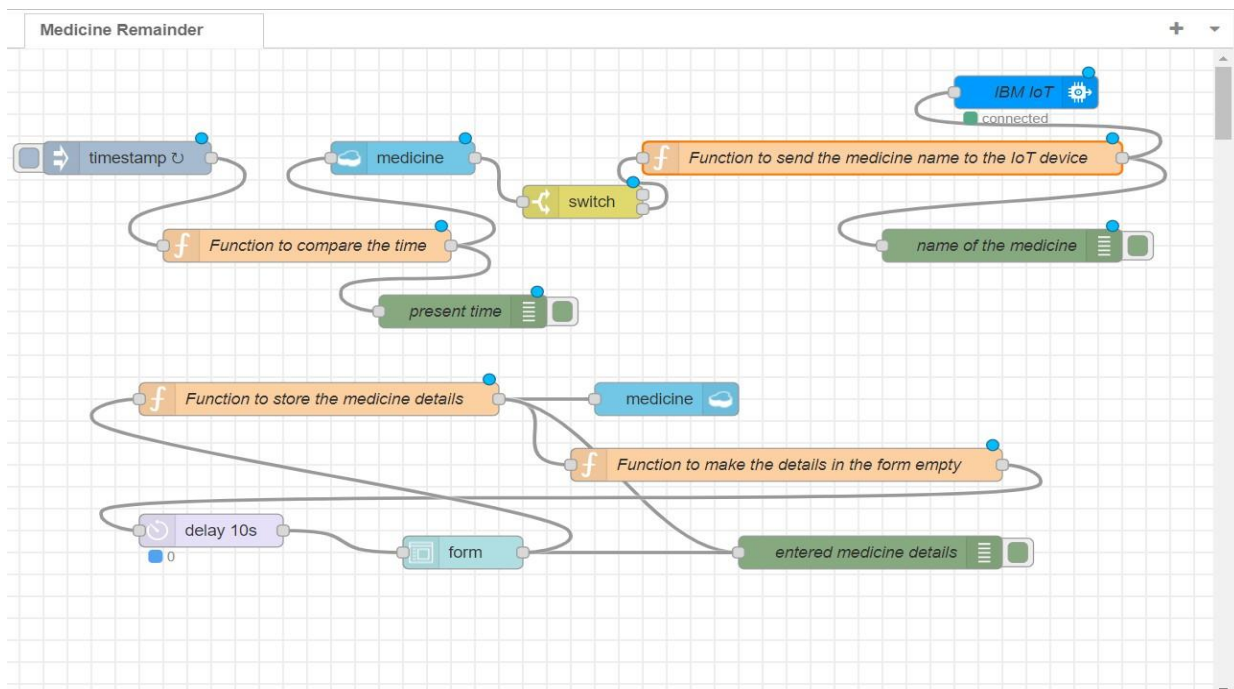
1 msg.payload={"command":msg.payload.name}
2 return msg;

```

- Node flow for sending the name of the medicine to the IoT device

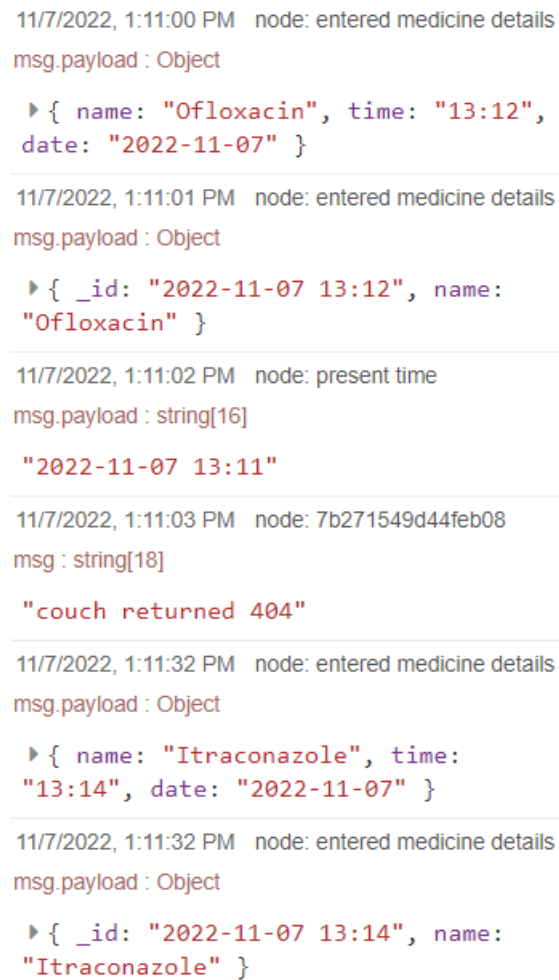


3) Total node flow of the entire Web UI



4)After deploying the following are the results

- The following image shows the details of the medicine entered



```
11/7/2022, 1:11:00 PM node: entered medicine details
msg.payload : Object
  ▶ { name: "Ofloxacin", time: "13:12",
    date: "2022-11-07" }

11/7/2022, 1:11:01 PM node: entered medicine details
msg.payload : Object
  ▶ { _id: "2022-11-07 13:12", name:
    "Ofloxacin" }

11/7/2022, 1:11:02 PM node: present time
msg.payload : string[16]
  "2022-11-07 13:11"

11/7/2022, 1:11:03 PM node: 7b271549d44feb08
msg : string[18]
  "couch returned 404"

11/7/2022, 1:11:32 PM node: entered medicine details
msg.payload : Object
  ▶ { name: "Itraconazole", time:
    "13:14", date: "2022-11-07" }

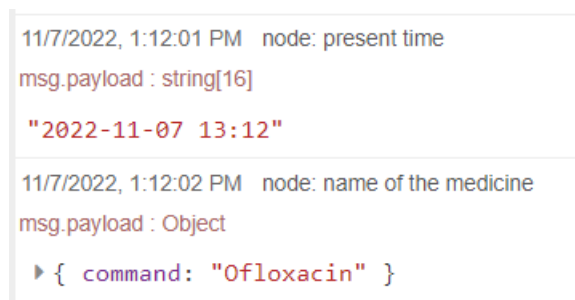
11/7/2022, 1:11:32 PM node: entered medicine details
msg.payload : Object
  ▶ { _id: "2022-11-07 13:14", name:
    "Itraconazole" }
```

- The details of the medicine will be stored in the cloudant db under 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

