

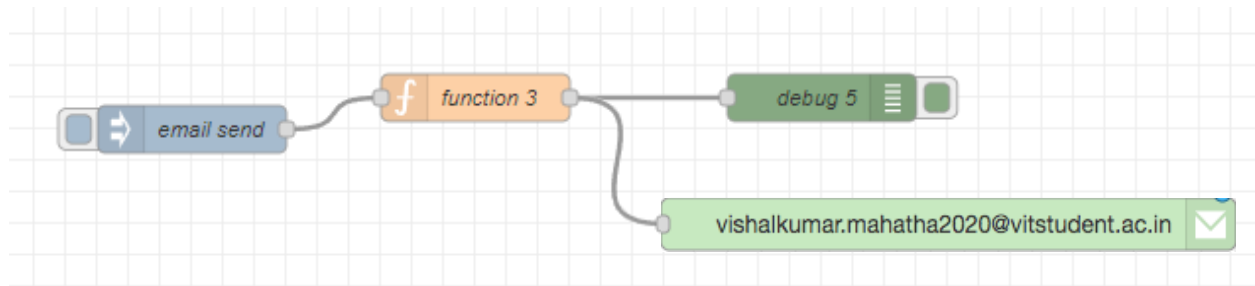
# IOT DOMAIN ANALYST

## LAB-1

NAME : Vishal Kumar Mahatha

REG NO : 20BRS1168

EMAIL NOTIFICATION :



**Name** email send

msg. payload = a\_z Hello User

msg. topic = a\_z




**Properties**

**Name** function 3

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

```
1 var temp=msg.payload;
2 msg.to=" vishalkumar.mahatha2020@vitstudent.ac.in ";
3 msg.from= "markatony1223@gmail.com"
4 msg.topic=" Vishal (20BRS1168) |"
5 return msg;
```

⚙️ Properties



✉️ To

vishalkumar.mahatha2020@vitstudent.ac.in

🌐 Server

smtp.gmail.com

🔌 Port

465

☒ Use secure connection.

👤 Userid

markatony1223@gmail.com

🔒 Password

.....

🔒 TLS option

☒ Check server certificate is valid

🏷️ Name

Name

12/7/2022, 5:08:41 PM node: debug 5

Vishal (20BRS1168) : msg.payload : string[10]

"Hello User"

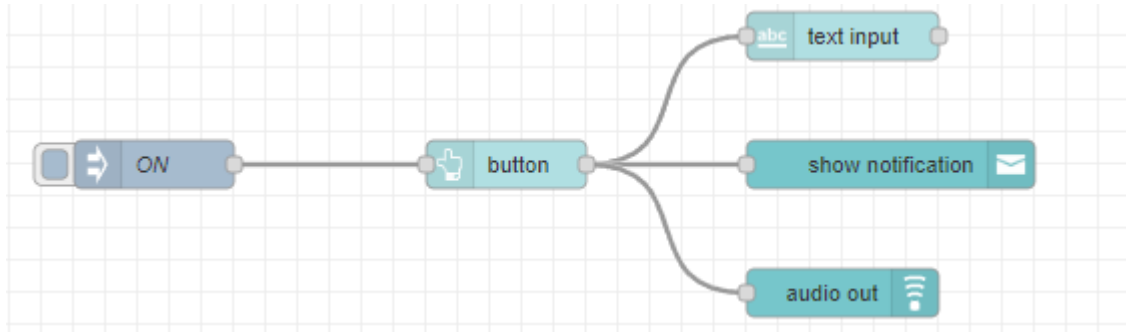
markatony1223@gmail.com

5:08 PM

Vishal(20BRS1168)

Hello User

## DASHBOARD SHOW NOTIFICATION :



🖱️ Name

≡	msg. payload	=	▼ a_z	✕
≡	msg. topic	=	▼ a_z	✕

## ⚙ Properties



📁 Group

[lab1] Chaitanya



📏 Size

auto

🖼 Icon

optional icon

🏷 Label

button

📄 Tooltip

optional tooltip

🔥 Color

optional text/icon color

🔥 Background

optional background color

✉ When clicked, send:

Payload



a<sub>z</sub>

hello!

Topic



msg. topic



➔ If msg arrives on input, emulate a button click: ☐

</> Class

Optional CSS class name(s) for widget

🏷 Name

Name

 Group  

 Size

 Label

 Tooltip

 Mode   Delay (ms)


➔ If **msg** arrives on input, pass through to output: ☒

Send value on focus leave: ☒

☒ When changed, send:

Payload      Current value

Topic

 Class

 Name

 Layout

 Timeout (S)

☐ Border

➔ Send to all browser sessions. ☒

 Accept raw HTML/JavaScript input in msg.payload to format popup. ☐

 Class

 Topic

 Name

**Note:** checking *Accept raw HTML/JavaScript* can allow injection of code. Ensure the input comes from trusted sources.

Group

[lab1] Chaitanya

▼

TTS Voice

5 : Google UK English Female (en-GB)

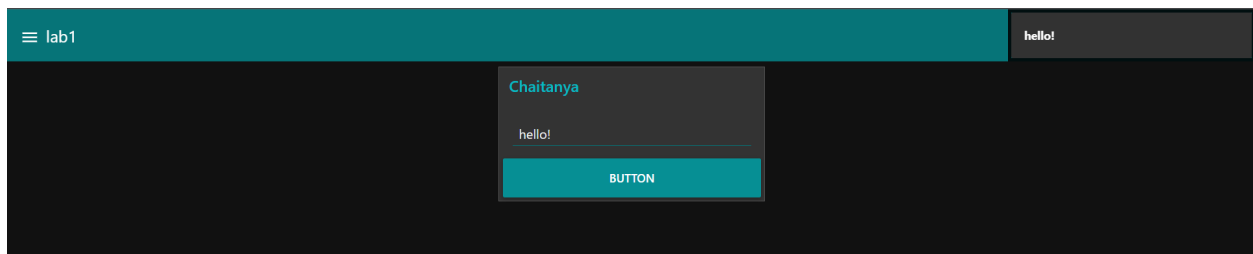
▼

☐ Play audio when window not in focus.

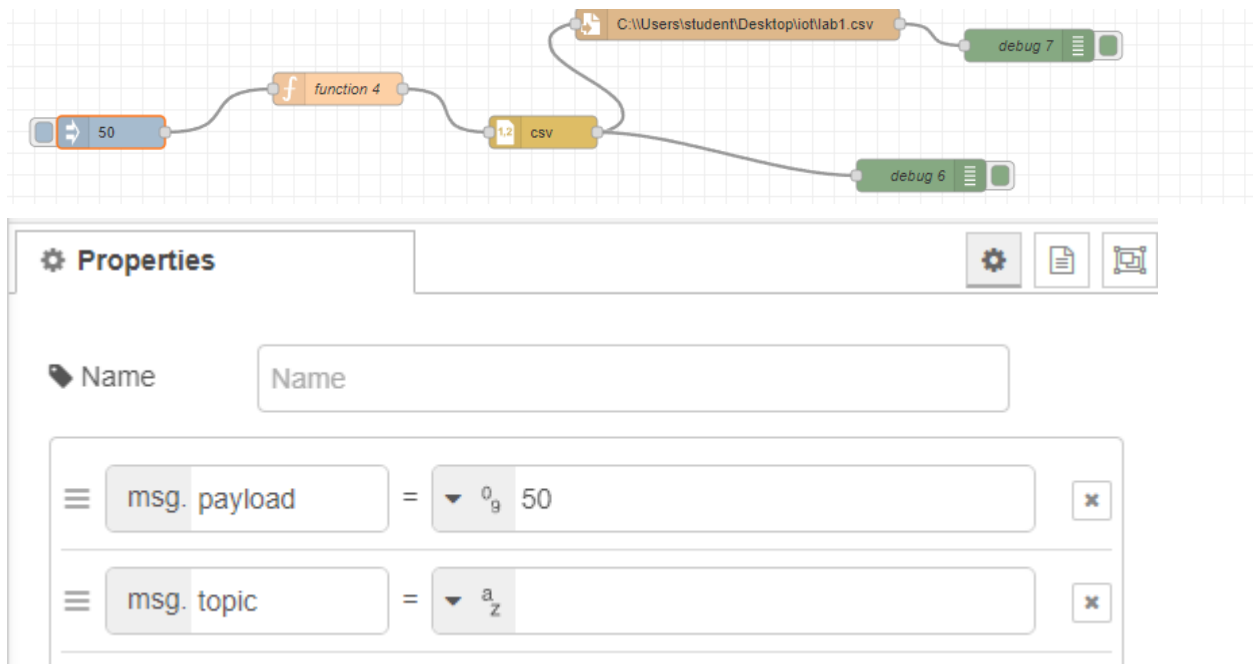
Name

Name

OUTPUT :



Data format conversions in Node-Red (CSV file processing) :



Name  

 Setup

On Start

On Message

On Stop

```
1 var d = new Date();
2 var t = d.getTime();
3 var payload = {"time":t,"payload":msg.payload,"topic":msg.topic};
4 msg.payload = payload;
5 return msg;
```


### Edit csv node


Delete

Cancel

Done


#### Properties



 Columns

 Separator  



 Name


#### CSV to Object options

-  Input Skip first  lines
- ☐ first row contains column names
- ☒ parse numerical values
- ☐ include empty strings
- ☐ include null values

 Output  

#### Object to CSV options

 Output  

Newline  

⚙️ Properties

⚙️

📄

🔍

☰ Output

▼ msg.

payload

🔗 To

☒ debug window

☐ system console

☐ node status (32 characters)

🏷️ Name

debug 7

1670413057165#50#		
1670413512012#50#		
1670414030011#50#		

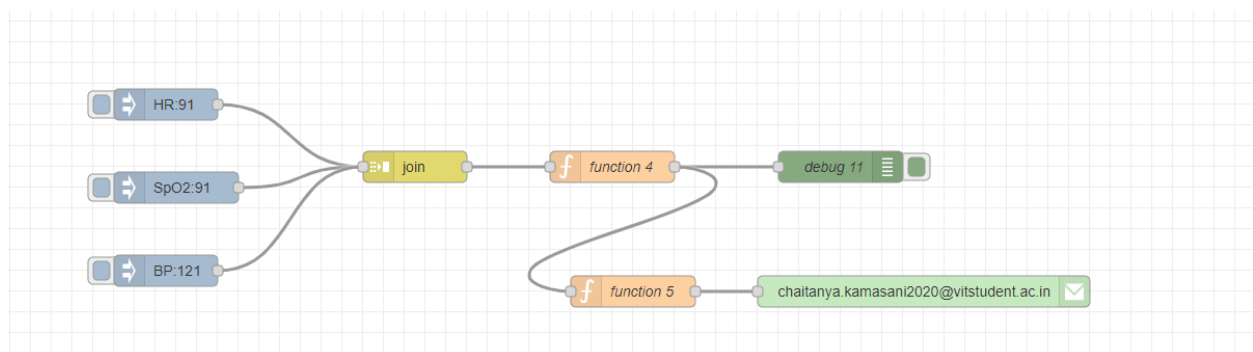


# Problem to solve (Exercise-I)

- Drug consumption level notification through Email
- The drug consumption is identified three levels
  - High
  - Medium
  - Low
- The consumption is decided based on patient's three parameters
  - HR
  - SpO2
  - BP
- If all the values are high alert the indication as "High"
- If all the values are Low alert the indication as "Low".
- Other cases it is "medium".

Parameter	Normal values	Low	High
HR	Between 60 to 90 beats per minute	<60	>90
SpO2	Between 80 to 90	<80	>90
BP	Between 90mm Hg and 120mm Hg	<90	>120

- **Message notification**
  - Mention the subject as "Drug consumption level reg".
  - Message as  
HR:80,SpO2:85,BP:100,consumption level: Medium



⚙️ Properties

⚙️

📄

🖨️

📁 Name

function 4

📄

⚙️ Setup

On Start

On Message

On Stop

```
1 let spo2 = msg.payload.Spo2;
2 let hr = msg.payload.HR;
3 let bp = msg.payload.BP;
4 let consumption_level = "";
5 if(spo2>90 && hr>90 && bp > 120){
6   consumption_level = "High";
7 }
8 else if (spo2 > 90 && hr > 90 && bp > 120){
9   consumption_level = "Low";
10 }
11 else{
12   consumption_level = "Medium";
13 }
14 msg.payload = "SpO2:"+spo2+",hr:"+hr+",bp:"+bp+",Consumption
15 return msg;
```

⚙️ Properties

⚙️

📄

🖨️

📁 Name

function 5

📄

⚙️ Setup

On Start

On Message

On Stop

```
1 msg.to= "chaitanya.kamasani2020@vitstudent.ac.in"
2 msg.from = "markatony1223@gmail.com"
3 msg.topic = "Drug consumption level reg"
4 return msg;
```

⚙️ Properties

⚙️

📄

🖨️

✉️ To

chaitanya.kamasani2020@vitstudent.ac.in

🌐 Server

smtp.gmail.com

🔌 Port

465

☒ Use secure connection.

👤 Userid

markatony1223@gmail.com

🔒 Password

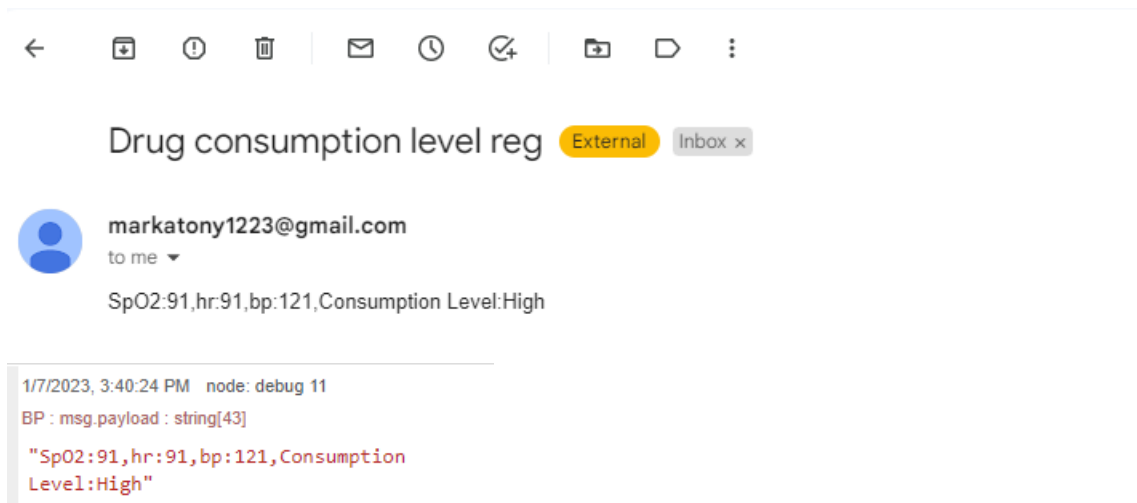
.....

🔒 TLS option

☒ Check server certificate is valid

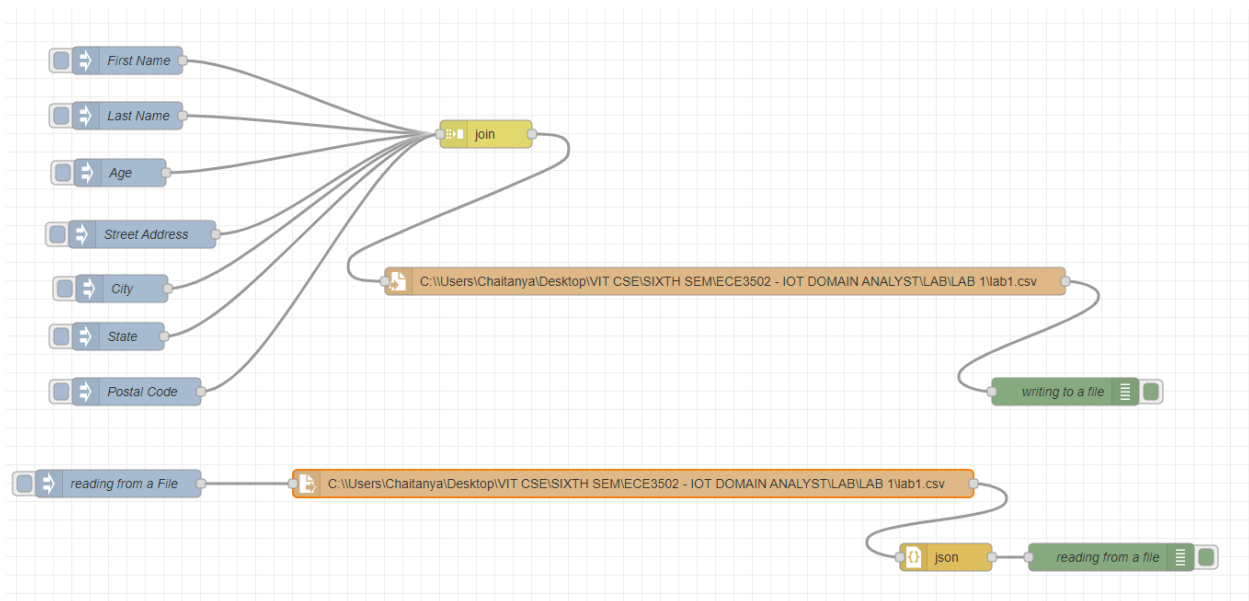
📁 Name

Name



## Exercise-II

- Practising Writing into file as firstName,LastName,age,Street Address,City ,State & Postal code use format data using CSV.
- Read the data from file and convert the data in the following JSON format:
  - firstName
  - lastName
  - age
  - Street Address
  - city
  - state
  - postalCode



### Properties

Name: First Name

msg. payload	=	a <sub>z</sub> Chaitanya	x
msg. topic	=	a <sub>z</sub> First Name	x

Edit join node

Delete

Cancel

Done

⚙ Properties

⚙

📄

🖨

Mode

manual

▼

Combine each

▼ msg. payload

to create

a key/value Object

▼

using the value of

msg. topic

as the key

Send the message:

• After a number of message parts

7

☒ and every subsequent message.

• After a timeout following the first message

seconds

• After a message with the `msg.complete` property set

🔖 Name

Name

Edit write file node

Delete

Cancel

Done

⚙ Properties

⚙

📄

🖨

📁 Filename

▼ path C:\Users\Chaitanya\Desktop\VIT CSE\SIXT

🔗 Action

overwrite file

▼

☒ Add newline (\n) to each payload?

☐ Create directory if it doesn't exist?

🚩 Encoding

default

▼

🔖 Name

Tip: The filename should be an absolute path, otherwise it will be relative to the working directory of the Node-RED process.

Edit debug node

Delete

Cancel

Done

⚙️ Properties

⚙️

📄

🖼️

📄 Output

▼ msg. payload

🔗 To

☒ debug window

☐ system console

☐ node status (32 characters)

📄 Name

writing to a file

Edit read file node

Delete

Cancel

Done

⚙️ Properties

⚙️

📄

🖼️

📄 Filename

▼ path C:\\Users\\Chaitanya\\Desktop\\VIT CSE\\SIXT

🔗 Output

a single utf8 string ▼

🚩 Encoding

default ▼

📄 Name

Tip: The filename should be an absolute path, otherwise it will be relative to the working directory of the Node-RED process.

Edit json node

Delete

Cancel

Done

⚙ Properties

⚙

📄

🖨

⦿ Action

Convert between JSON String & Object

▼

⋮ Property

msg. payload

📁 Name

Name

Object to JSON options

☒ Format JSON string

Edit debug node

Delete

Cancel

Done

⚙ Properties

⚙

📄

🖨

☰ Output

▼ msg. payload

🔗 To

☒ debug window

☐ system console

☐ node status (32 characters)

📁 Name

reading from a file

🔍 debug

📄

🗑

⚙

▼

🔍 all nodes ▼

🗑 all ▼

1/7/2023, 2:35:58 PM node: writing to a file

Postal Code : msg.payload : Object

▶ { First Name: "Chaitanya", Last Name: "Kamasani", Age: "20", Street Address: "7-103/A Janardhan Colony", City: "Tirupathi" ... }

1/7/2023, 2:36:00 PM node: reading from a file

msg.payload : Object

▶ { First Name: "Chaitanya", Last Name: "Kamasani", Age: "20", Street Address: "7-103/A Janardhan Colony", City: "Tirupathi" ... }

