

SPRINT-1

Date	15 NOVEMBER 2022
Team ID	PNT2022TMID42281
Project Name	Project – SMART SOLUTIONS FOR RAILWAYS

PROCEDURE:

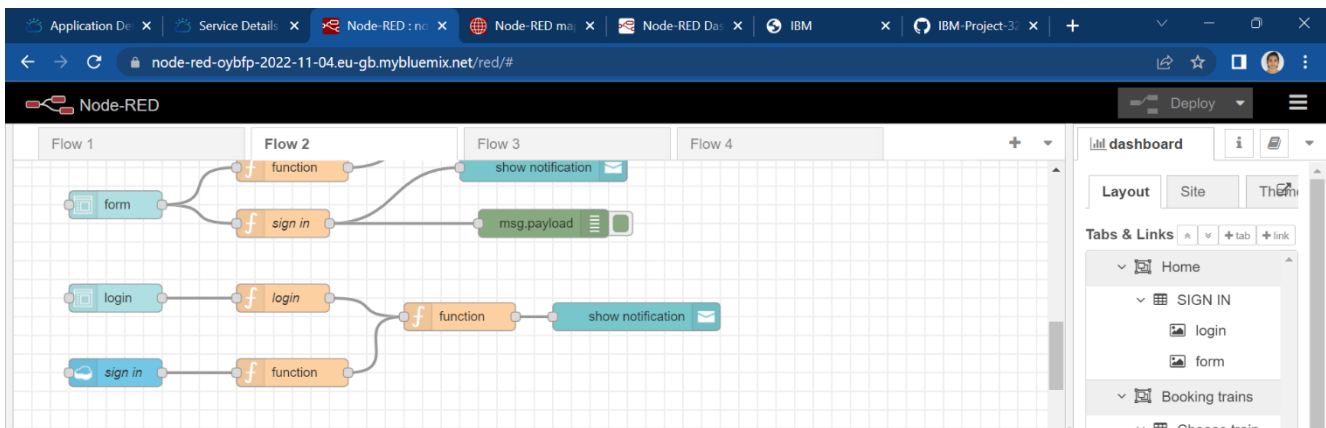
Step1: Develop node red application

Step2: Install the required nodes from manage palette option

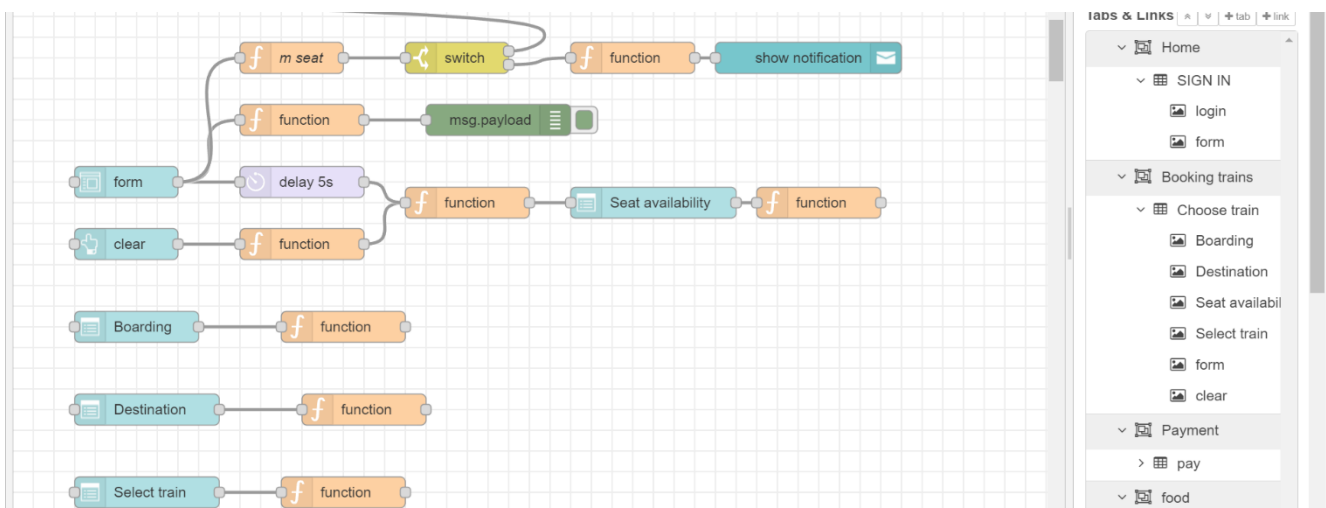
Step3: Connect the node flow

Step4: Deploy the flow

WEB APPLICATION :



NODES TO BOOK TRAIN:



FUNCTION NODE COMMAND TO INDICATE THE AVAILABLE SEATS:

```
var a=global.get('a')
var s= []
for(let i=0;i<a.length==0;i++){
  s.push(a[i])
}
if(s.length==0){
  msg.options=[{"No seats available":0}]
}
else{
  msg.options= s
}
msg.payload= s
return msg;
```

FUNCTION NODE COMMAND TO CHOOSE THE AVAILABLE SEATS:

```
var s=global.get('s')
var a=global.get('a')
function reg(x){
  for(let i=0;i<a.length;i++){
    if(a[i]==x){
      a.splice(i,1)
    }
  }
}
if(s==1){
  global.set('s1',s)
  reg(s)
}
else if(s==2){
  global.set('s2',s)
  reg(s)
}
else if(s==3){
  global.set('s3',s)
  reg(s)
}
else if(s==4){
  global.set('s4',s)
  reg(s)
}
else if(s==4){
  global.set('s4',s)
  reg(s)
}
return msg;
```

FUNCTION NODE COMMAND TO STORE DATA IN DATABASE:

```
var m=global.get('m')
var d=new Date();
var utc=d.getTime()+(d.getTimezoneOffset()*60000);
var offset=5.5;
newDate=new Date(utc+(3600000*offset));
var n=newDate.toISOString()
var date=n.slice(0,10)
var time=n.slice(11,19)
var d1=date+', '+time
msg.payload={
  "_id":d1,
  "Name":m.Name,
  "Age":m.Age,
  "Mobile":m.Num,
  "boarding":global.get('b'),
  "destination":global.get('d'),
  "Seat":global.get('s')
}
return msg;
```

FORM DETAILS:

The screenshot displays the Node-RED web interface in a browser. The main panel shows the 'Edit form node' configuration for a form titled '[Booking trains] Choose train'. The form has three visible elements: 'Name' (Text), 'Age' (Number), and 'Mobile num' (Number). Each element is marked as 'Required' and has a 'UiRows' value of 1. The 'Form elements' table lists these elements with their respective labels, names, types, and required status.

Label	Name	Type	Required	UiRows	Remove
Name	name	Text	<input checked="" type="checkbox"/>	1	
Age	age	Number	<input checked="" type="checkbox"/>	1	
Mobile num	num	Number	<input checked="" type="checkbox"/>	1	

On the right, the 'debug' console shows a series of log messages. Each message is an object with 'name' and 'lat' properties, representing train data. The messages are as follows:

- 11/15/2022, 11:23:25 AM: { name: "Train1", lat: 13.08363, lon: 80.2708 }
- 11/15/2022, 11:23:27 AM: { name: "Train2", lat: 12.40797, lon: 79.8141 }
- 11/15/2022, 11:23:29 AM: { name: "Train1", lat: 11.83331, lon: 79.37465 }
- 11/15/2022, 11:23:35 AM: { name: "Train1", lat: 11.59664, lon: 78.69899 }
- 11/15/2022, 11:23:41 AM: { name: "Train1", lat: 11.63431, lon: 78.11122 }

SEAT DROPDOWN BOX:

The screenshot shows the Node-RED web interface. The 'Edit dropdown node' dialog is open, showing the configuration for a dropdown menu. The 'Group' is set to '[Booking trains] Choose train'. The 'Label' is 'Seat availability'. The 'Placeholder' is 'Select option'. The 'Options' section shows four entries, each with a dropdown menu and a value field:

Option	Value
1	1
2	2
3	3
4	4

The 'debug' console on the right shows the following log messages:

```
11/15/2022, 11:23:59 AM node: 833946aa7ef65319  
iot-2/type/Sudha/d/45/evnt/status/fmt/json : msg.payload  
: Object  
  > { name: "Train1", lat: 13.08363,  
    lon: 80.2708 }  
11/15/2022, 11:24:01 AM node: 833946aa7ef65319  
iot-2/type/Sudha/d/45/evnt/status/fmt/json : msg.payload  
: Object  
  > { name: "Train2", lat: 12.40797,  
    lon: 79.8141 }  
11/15/2022, 11:24:03 AM node: 833946aa7ef65319  
iot-2/type/Sudha/d/45/evnt/status/fmt/json : msg.payload  
: Object  
  > { name: "Train1", lat: 11.83331,  
    lon: 79.37465 }  
11/15/2022, 11:24:09 AM node: 833946aa7ef65319  
iot-2/type/Sudha/d/45/evnt/status/fmt/json : msg.payload  
: Object  
  > { name: "Train1", lat: 11.59664,  
    lon: 78.69899 }  
11/15/2022, 11:24:15 AM node: 833946aa7ef65319  
iot-2/type/Sudha/d/45/evnt/status/fmt/json : msg.payload  
: Object  
  > { name: "Train1", lat: 11.63431,  
    lon: 78.11122 }
```

WEB UI OUTPUT:

The screenshot shows the Node-RED Dashboard web UI. The 'SIGN IN' form is displayed, with the following fields and values:

Field	Value
user name *	sudha
password *	55
confirm password *	55

The 'login' section shows the following fields and values:

Field	Value
email *	
password *	

WEB UI FOR TRAIN BOOKING:

IBM-Project-329-165828 x Application Details - IBM x Service Details - IBM Clou x Node-RED : node-red-oyl x Node-RED Dashboard x

node-red-oybfp-2022-11-04.eu-gb.mybluemix.net/ui/#/1?socketid=hBHpgH8MZITFF8LuAAAJ

≡ Booking trains

Choose train

Boarding Coimbatore

Destination Chennai

Seat availability Select option

Select train Blue mountain

Name *
sudha

Age *
20

Mobile num *
9876543210

SUBMIT CANCEL

CLEAR

Windows taskbar: 11:27 15-11-2022