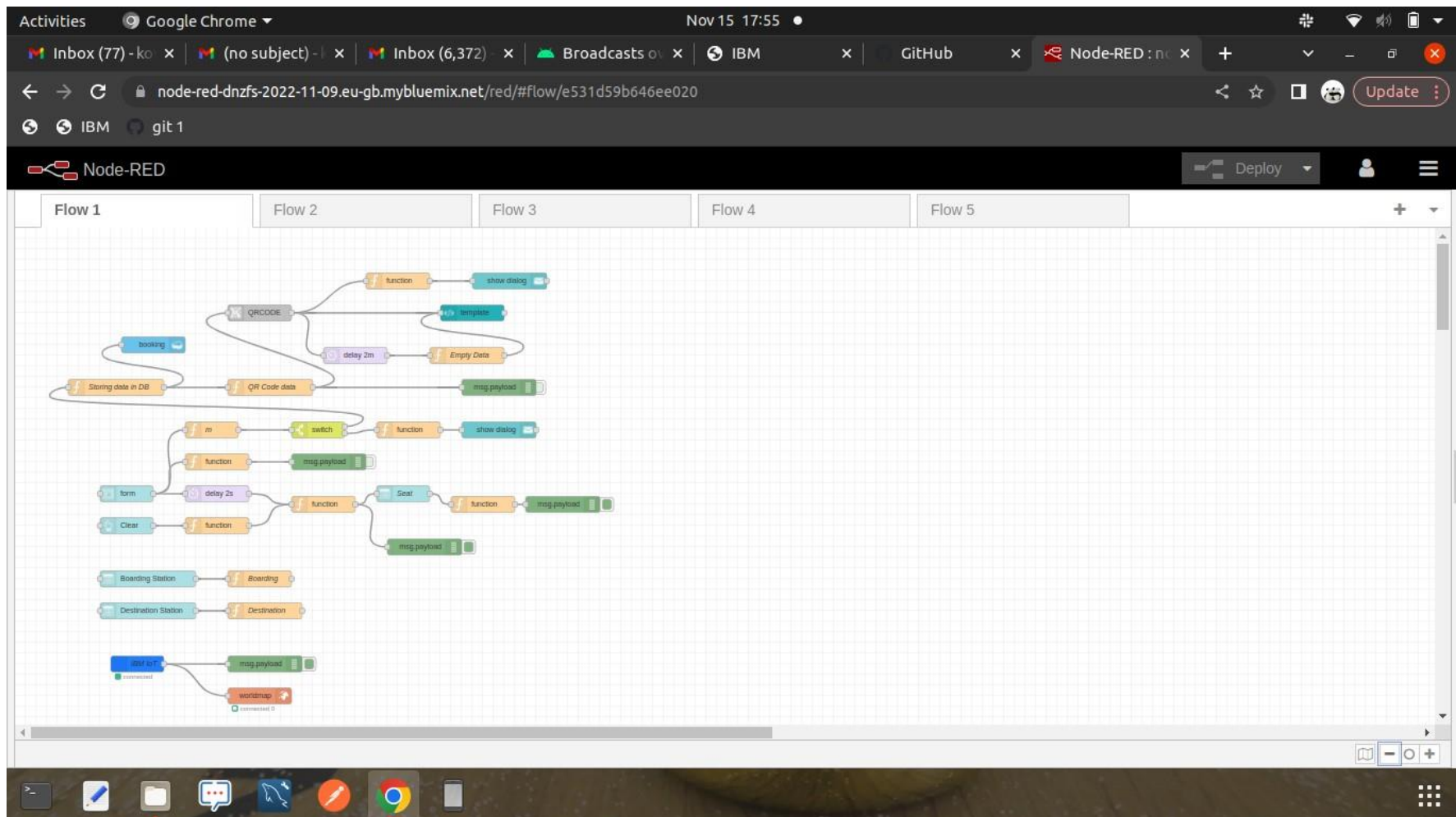


Sprint 2

Develop the web application using Node-RED

Date	18 November 2022
Team ID	PNT2022TMID19615
Project Name	Smart Solutions for Railways
Maximum Marks	8 Marks

Node-RED Flow Chart



Node-RED For IBM IoT

Activities Google Chrome Nov 15 18:46

Inbox (77) x Inbox (2,52 x) x Inbox (6,37 x) x Broadcast x IBM x IBM-Projec x Node-RED x milestone x +

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020

IBM git 1

Node-RED

Flow 1 Flow 2 Flow 3 Flow 4

form delay 2s function Seat function

Clear function

Boarding Station Boarding

Destination Station Destination

IBM IoT connected

msg.payload worldmap connected 0

Deploy

Edit ibmiot in node

Delete Cancel Done

Properties

Authentication API Key

API Key apikey1

Input Type Device Event

Device Type ☐ All or railway23

Device Id ☐ All or Device1

Event ☒ All or +

Format ☐ All or json

QoS 0

☐ Enabled

Node-RED For World Map

Activities Google Chrome Nov 15 18:50

Inbox (77) x Inbox (2,52 x) Inbox (6,37 x) Broadcasts x IBM x IBM-Projec x Node-RED x milestone x +

node-red-dnzs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020

IBM git 1

Node-RED

Flow 1 Flow 2 Flow 3 Flow 4

form delay 2s function Seat function

Clear function

Boarding Station Boarding

Destination Station Destination

IBM IoT connected

msg.payload

worldmap connected 0

Edit worldmap node

Delete Cancel Done

Properties

Start Latitude Longitude Zoom

Map list 7 selected

Base map OpenStreetMap Greyscale

Overlays 5 selected

Cluster when zoom level is less than 0 (0, off - 19)

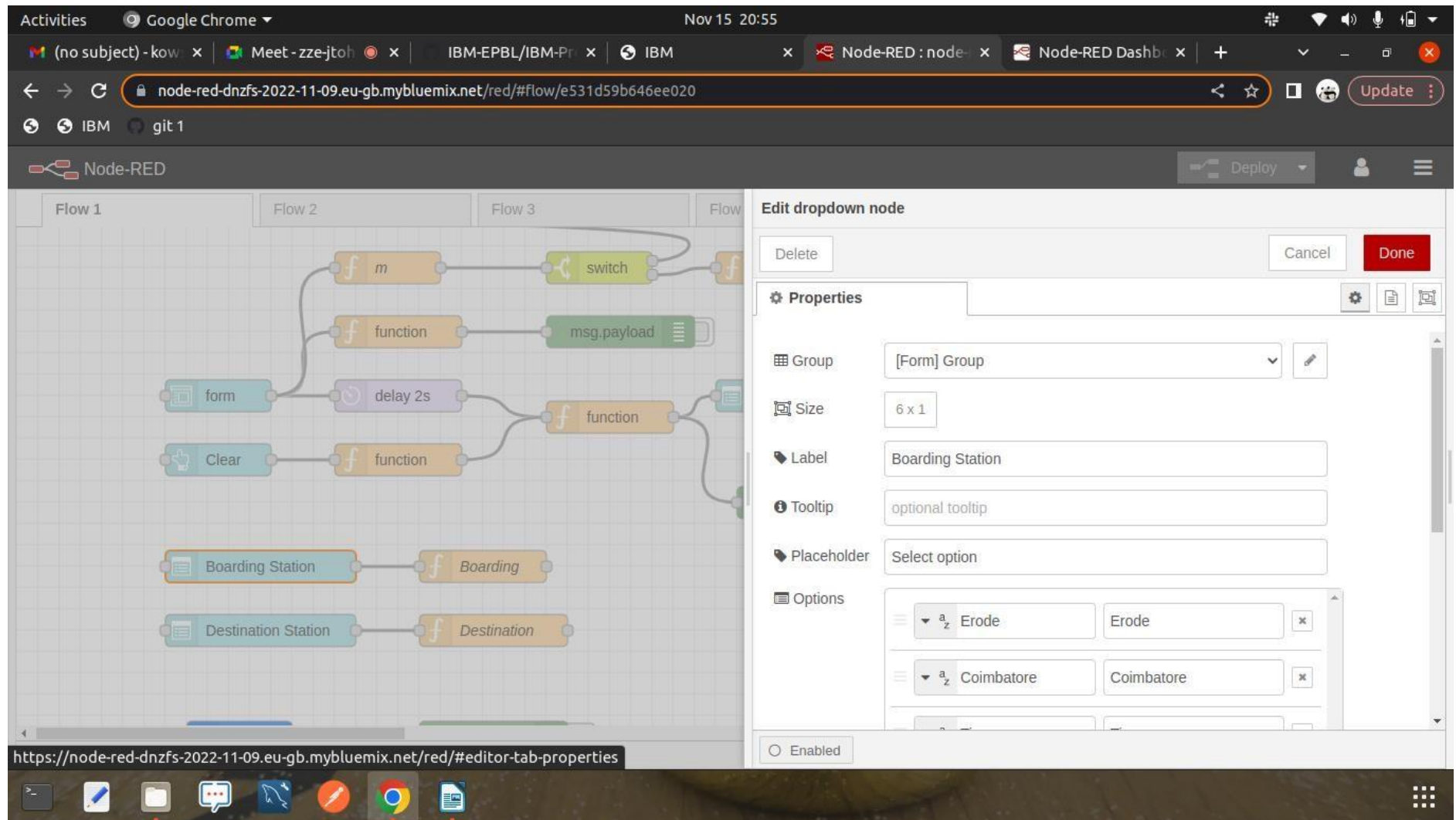
Max age Remove markers after 600 seconds

User menu Show Layer menu Show

Enabled

The screenshot displays the Node-RED web interface in a Google Chrome browser. The top navigation bar shows the current time as 18:50 on Nov 15. The browser's address bar indicates the URL: node-red-dnzs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020. The main workspace is divided into four flows. Flow 1 contains a 'form' node. Flow 2 contains a 'delay 2s' node. Flow 3 contains a 'function' node. Flow 4 contains a 'Seat' node and another 'function' node. The 'function' node in Flow 3 is connected to the 'Seat' node in Flow 4. Below these flows, there are several other nodes: a 'Clear' node, a 'Boarding Station' node connected to a 'Boarding' function node, a 'Destination Station' node connected to a 'Destination' function node, an 'IBM IoT' node (labeled 'connected'), and a 'worldmap' node (labeled 'connected 0'). The 'worldmap' node is connected to the 'IBM IoT' node. On the right side, the 'Edit worldmap node' configuration panel is open. It includes a 'Delete' button, 'Cancel' and 'Done' buttons, and a 'Properties' section. The 'Properties' section has several settings: 'Start' with 'Latitude' and 'Longitude' input fields and a 'Zoom' dropdown set to '3'; 'Map list' set to '7 selected'; 'Base map' set to 'OpenStreetMap Greyscale'; 'Overlays' set to '5 selected'; 'Cluster when' set to 'zoom level is less than 0 (0, off - 19)'; 'Max age' set to 'Remove markers after 600 seconds'; 'User menu' set to 'Show'; and 'Layer menu' set to 'Show'. At the bottom of the panel, there is an 'Enabled' checkbox.

Node-RED For Boarding Station



Node-RED For Destination Station

Activities Google Chrome Nov 15 20:57

(no subject) - kow x Meet - zze-jtoh x IBM-EPBL/IBM-Pr x IBM x Node-RED : node x Node-RED Dashb x +

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020 Update

IBM git 1 Node-RED Deploy

Flow 1 Flow 2 Flow 3 Flow 4

form Clear Boarding Station Destination Station

msg.payload function delay 2s function function m switch

Boarding Destination

Edit dropdown node

Delete Cancel Done

Properties

Options

▼ a _z Erode	Erode	x
▼ a _z Coimbatore	Coimbatore	x
▼ a _z Tirupur	Tirupur	x
▼ a _z Salem	Salem	x

+ option

Allow multiple selections from list: ☐

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

Enabled

Node-RED For Form

Activities Google Chrome Nov 15 20:59

Inbox (2,526) - kov x Meet - zze-jtoh x IBM-EPBL/IBM-Pr x IBM x Node-RED : node- x Node-RED Dashb x + -

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020 Update

IBM git 1

Node-RED Deploy

Flow 1 Flow 2

form

Clear

Boarding Station

Destination Station

Edit form node

Delete Cancel Done

Properties

Group [Form] Details

Size 6 x 2

Label optional label

	Label	Name	Type	Required	UiRows	Remove
≡	Name	Name	Text	<input checked="" type="checkbox"/>		
≡	Age	Age	Number	<input checked="" type="checkbox"/>		
≡	Mobile.No	Num	Number	<input checked="" type="checkbox"/>		

☐ Enabled

Edit function node For Form

Activities Google Chrome Nov 15 21:02

Inbox (2,525) - kov x Meet - zze-jtoh x IBM-EPBL/IBM-Pr x IBM x Node-RED : node- x Node-RED Dashb x +

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020

IBM git 1

Node-RED

Flow 1 Flow 2 Flow 3 Flow 4

Storing data in DB QR Code data delay 2m

f m switch

function msg.payload

form delay 2s function

Clear function

Boarding Station Boarding

Deploy

Edit function node

Delete Cancel Done

Properties

Name m

Setup On Start On Message On Stop

```
1 global.set('m',msg.payload)
2 var a = global.get('s')
3 if(a==1 || a==2 || a==3 || a==4 || a==5){
4     msg.payload = 0
5 }
6 else{
7     msg.payload = 1
8 }
9 return msg;
```

Enabled

https://node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#editor-tab-properties

Edit function node For Storing data DB

The screenshot shows the Node-RED web interface in a Google Chrome browser. The address bar displays the URL: `node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020`. The interface includes a sidebar with a node palette on the left and a top bar with a 'Deploy' button. The main workspace shows 'Flow 1' with a sequence of nodes: 'booking', 'Storing data in DB', 'QR Code data', 'm', 'function', 'form', 'delay 2s', 'Clear', 'function', 'Boarding Station', and 'Boarding'. The 'Edit function node' panel is open on the right, showing the configuration for the 'Storing data in DB' node. The 'Name' field is set to 'Storing data in DB'. The 'On Message' tab is selected, displaying the following JavaScript code:

```
1 var m=global.get('m')
2 var d=new Date();
3 var utc=d.getTime()+(d.getTimezoneOffset()*60000);
4 var offset=5.5;
5 newDate=new Date(utc+(3600000*offset));
6 var n=newDate.toISOString()
7 var date=n.slice(0,10)
8 var time=n.slice(11,19)
9 var d1=date+' '+time
10
11 msg.payload={
12   "id":d1,
13   "Name":m.Name,
14   "Age":m.Age,
15   "Mobile":m.Num,
16   "boarding":global.get('h')}
```

The 'Enabled' checkbox is checked at the bottom of the panel.

Edit cloudant out node for Booking

The screenshot displays the Node-RED web interface in a Google Chrome browser. The address bar shows the URL: `node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020`. The interface includes a sidebar with a node palette on the left and a top bar with a 'Deploy' button. The main workspace shows a flow diagram with several nodes: a 'booking' node, a 'QR CODE' node, a 'delay 2m' node, a 'form' node, and several function nodes labeled 'Storing data in DB', 'QR Code data', 'm', 'function', and 'msg.payload'. A right-hand panel titled 'Edit cloudant out node' is open, showing configuration options for a Cloudant output node. The configuration includes a 'Service' dropdown, a 'Database' field, an 'Operation' dropdown, a checked 'Only store msg.payload object?' checkbox, and a 'Name' field. The 'Enabled' checkbox at the bottom is also checked.

Activities Google Chrome Nov 15 23:29

Inbox (2, x) Sprint 3 (x) Meet (x) Sprint 3 (x) Sprint 3 (x) IBM-Proj x IBM x Node-RE x Node-RE x +

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020 Update

IBM git 1

Node-RED Deploy

filter nodes Flow 1 Flow 2 Flow 3

discovery discovery document loader discovery query builder discovery V2 language translator document translator language identify language translator util

booking QR CODE delay 2m

f Storing data in DB f QR Code data

f m switch

f function msg.payload

form delay 2s f function

Edit cloudant out node

Delete Cancel Done

Properties

Service node-red-dnzfs-2022--cloudant-16680162778

Database booking

Operation insert

☒ Only store msg.payload object?

Name Name

☒ Enabled

Edit QR code gen node

Activities Google Chrome Nov 15 23:30

Inbox (2) x Sprint 3 x Meet x Sprint 3 x Sprint 3 x IBM-Proj x IBM x Node-RE x Node-RE x +

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020

IBM git 1

Node-RED

filter nodes

Flow 1 Flow 2 Flow 3

discovery
discovery document loader
discovery query builder
discovery V2
language translator
document translator
language identify
language translator util

booking

Storing data in DB

QR CODE

QR Code data

delay 2m

m

function

switch

msg.payload

Edit qrcode gen node

Delete Cancel Done

Properties

Name QR CODE

☐ Show actionable string in Status (max 150 char)

Colors Background QRcode

Type Html-Link or Text

Text or URL https://example.com

Enabled

Edit function node template

Activities Google Chrome Nov 15 23:33

Inbox (2) x Sprint 3 x Meet x Sprint 3 x Sprint 3 x IBM-Proj x IBM x Node-RE x Node-RE x +

node-red-dnzfs-2022-11-09.eu-gb.mybluemix.net/red/#flow/e531d59b646ee020

IBM git 1

Node-RED

filter nodes

Flow 1 Flow 2 Flow 3

discovery discovery document loader discovery query builder discovery V2 language translator document translator language identify language translator util

booking

Storing data in DB

QR CODE

QR Code data

delay 2m

m

function

switch

msg.payload

Edit template node

Delete Cancel Done

Properties

Template type Widget in group

Group [Form] QR Code

Size 5 x 5

Class Optional CSS class name(s) for widget

Name Name

Template

```
1 <img src={{msg.payload}} />
```

Enabled