

## Lab 2 BITS 3533 Wireless Network and Mobile Computing Sem 1 2022/2023 (Individual)

### Learning Outcome

At the end of this lab session, students are able to

- Install Node-Red for Android
- Access the installed Node-Red from another PC/Laptop

### Introduction to Node Red

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways. It provides a browser-based editor that makes it easy to wire together flows using the wide range of nodes in the palette that can be deployed to its runtime in a single-click.

Check the following link for further reading.

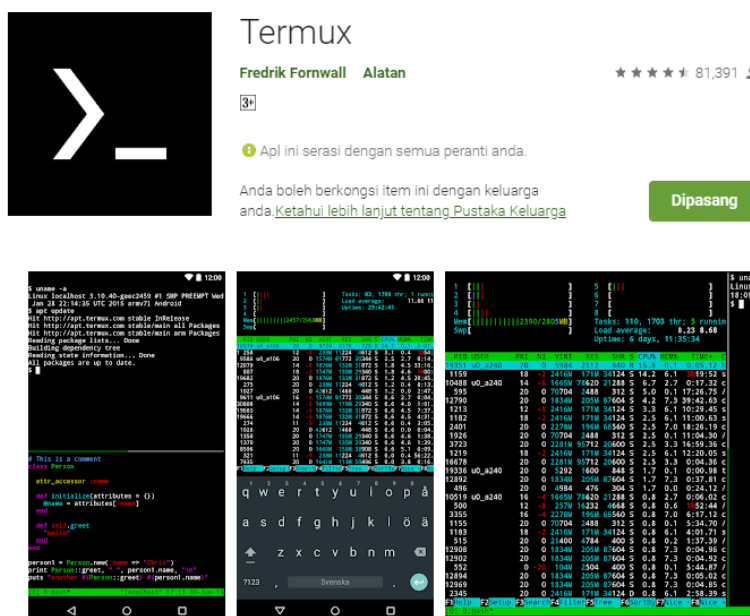
<https://nodered.org/>

### Required Tools

- Android Smartphone as Node-Red server (At least 1 unit pergroup)
- PC/Desktop to access the Node-Red server
- Termux app uses for installation and running the node red inside smartphone

### Node- Red Installation Steps

- Work in a group of 5. All students are encouraged to install in their own phone
- Get Temux app from Play Store and install to your smartphone.



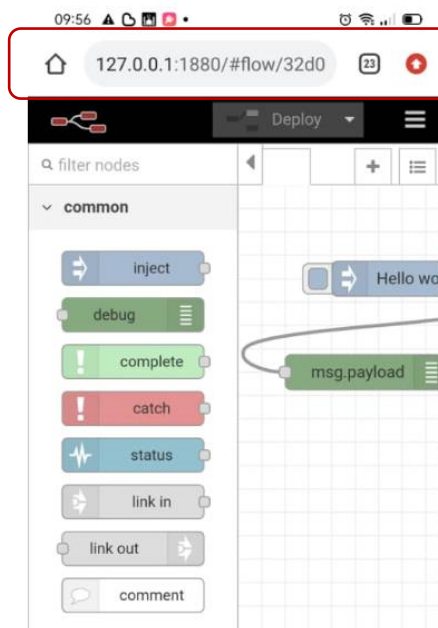
- After installation, open termux and install Node- Red using the following command at Termux

```
apt update
apt upgrade
apt install coreutils nano nodejs
npm i -g --unsafe-perm node-red
node-red
```

- After running node-red in Termux, you can access the node-red using local host <http://localhost:1880>

```
You should set your own key using the 'credential
Secret' option in
your settings file. Node-RED will then re-encryp
t your credentials
file using your chosen key the next time you dep
loy a change.
-----
20 Oct 09:39:36 - [info] Starting flows
20 Oct 09:39:36 - [info] Started flows
20 Oct 09:39:36 - [info] Server now running at h
ttp://127.0.0.1:1880/
```

- Open your browser and access <http://127.0.0.1:1880> and the node-red will automatically create flow link for you. Example : <http://127.0.0.1:1880/#flow/32d099bf.68e886>



### **Access Node- Red Server (Smartphone) from another PC/Laptop**

- Using command ifconfig, find ip address for your node-red server/smartphone. Note: To exit node red use control C
- Open your PC/laptop browser and access your node-red smartphone server by using your laptop/PC.

<http://127.0.0.1:1880/#flow/32d099bf.68e886>. Please change local host address to smartphone address.

### **Submission**

1. Screenshot your node-red interface
2. Shows your steps to access node-red server from another laptop/PC
3. Submit your work using ULearn