Group members:

Muhammad Izham Bin Norhamadi B032020039 Affendy Elyas bin Azhari Sharidan B032020024 Ahmad Sha Herizam Bin Tahir B032020009

Lab 6 Introduction to Node-Red

1) Node-Red Installation Steps

```
Welcome to Termux!
Community forum: https://termux.com/community
Gitter chat:
                 https://gitter.im/termux/termux
IRC channel:
                  #termux on libera.chat
Working with packages:
 * Search packages:
                       pkg search <query>
 * Search packages: pkg search <query>
* Install a package: pkg install <package>
 * Upgrade packages: pkg upgrade
Subscribing to additional repositories:
 * Root:
             pkg install root-repo
             pkg install x11-repo
 * X11:
Report issues at https://termux.com/issues
  $ apt update
Hit:1 https://packages.termux.dev/apt/termux-main stable
 InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
- $ apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
O upgraded, O newly installed, O to remove and O not upg
raded.
```

Figure 1 Termux update and upgrade

1. Make sure Termux packages updated and upgraded

```
ور 🕏 ال
      10:08 🗑 🖬 >_ 📺
    $ npm i -g --unsafe-perm node-red
                                ] \ reify:@node-red/editor-client: h
                           install
 > node-pre-gyp install --fallback-to-build
node-pre-gyp info it worked if it ends with okclient: h
node-pre-gyp info using node-pre-gyp@1.0.10
node-pre-gyp info using node@18.12.1 | android | arm64
node-pre-gyp info check checked for "/data/data/com.term
ux/files/usr/lib/node_modules/node-red/node_modules/bcry
pt/lib/binding/napi-v3/bcrypt_lib.node" (not found)
node-pre-gyp http GET https://github.com/kelektiv/node.b
crypt.js/releases/download/v5.0.1/bcrypt_lib-v5.0.1-napi
 -v3-android-arm64-unknown.tar.gz
 node-pre-gyp ERR! install response status 404 Not Found
on https://github.com/kelektiv/node.bcrypt.js/releases/c
ownload/v5.0.1/bcrypt_lib-v5.0.1-napi-v3-android-arm64-u
node-pre-gyp
node-pre-gyp WARN Pre-built binaries not installable for bcrypt@5.0.1 and node@18.12.1 (node-v108 ABI, unknown) (falling back to source compile with node-gyp)
node-pre-gyp WARN Hit error response status 404 Not Found
d on https://github.com/kelektiv/node.bcrypt.js/releases/download/v5.0.1/bcrypt_lib-v5.0.1-napi-v3-android-arm64
gyp info it worked if it ends with okd/editor-client: h gyp info using node-gyp@9.1.0 gyp info using node@18.12.1 | android | arm64
gyp info ok
gyp info it worked if it ends with okd/editor-client: h
gyp info using node-gyp@9.1.0
gyp info using node@18.12.1 | android | arm64
gyp ERR! find Python \ reify:@node-red/editor-client: h
gyp ERR! find Python Python is not set from command line
 or npm configuration
               find Python Python is not set from environment
gyp
variable PYTHON
gyp ERR! find Python checking if "python3" can be used gyp ERR! find Python - "python3" is not in PATH or produ
ced an error
             ! find Python checking if "python" can be used
! find Python - "python" is not in PATH or produc
gyp
ed an error
               gyp
            	ext{R!} find Python You need to install the latest vers
gvp
ion of Python.

gyp ERR! find Python Node-gyp should be able to find and
 use Python. If not,
gyp ERR! find Python you can try one of the following op
gyp
    ESC
                     /
                                                                                      PGUP
                                            HOME
                                                                          END
                 CTRL
                                ALT
                                                                                      PGDN
```

Figure 2 Installing Node-Red

2. Install Node-Red using command npm i -g --unsafe-perm node-red

```
10:09 🗑 目 >_ 🗰
                                                                                  .III 🛜 💯
 npm notice
    $ node-red
 15 Nov 10:08:58 - [info]
Welcome to Node-RED
15 Nov 10:08:58 - [info] Node-RED version: v3.0.2
15 Nov 10:08:58 - [info] Node.js version: v18.12.1
15 Nov 10:08:58 - [info] Linux 4.14.180-perf-g098fdd1 ar
 m64 LE
15 Nov 10:08:59 - [info] Loading palette nodes
15 Nov 10:09:00 - [info] Settings file : /data/data/com.termux/files/home/.node-red/settings.js
15 Nov 10:09:00 - [info] Context store : 'default' [mod
15 Nov 10:09:00 - [info] Context store : 'default' [mod ule=memory]
15 Nov 10:09:00 - [info] User directory : /data/data/com.termux/files/home/.node-red
15 Nov 10:09:00 - [warn] Projects disabled : editorTheme.projects.enabled=false
15 Nov 10:09:00 - [info] Flows file : /data/data/com.termux/files/home/.node-red/flows.json
15 Nov 10:09:00 - [info] Creating new flow file
15 Nov 10:09:00 - [warn]
 Your flow credentials file is encrypted using a system-g
enerated key.
If the system-generated key is lost for any reason, your credentials file will not be recoverable, you will have to delete it
  and re-enter
 your credentials.
 You should set your own key using the 'credentialSecret'
  option in
 your settings file. Node-RED will then re-encrypt your c
 redentials
 file using your chosen key the next time you deploy a ch
ange.
 15 Nov 10:09:00 - [info] Server now running at http://12
7.0.0.1:1880/
15 Nov 10:09:00 - [warn] Encrypted credentials not found
15 Nov 10:09:00 - [info] Starting flows
15 Nov 10:09:00 - [info] Started flows
     ESC
                                                 HOME
                                                                                  END
                                                                                                PGUP
                   CTRL
                                    ALT
                                                                                                PGDN
```

Figure 3 Starting Node-Red server

3. Run Node-Red using command node-red

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

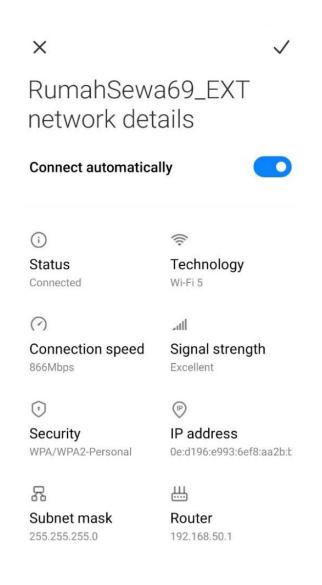


Figure 4 Wi-Fi settings

- 1. Find phone's local IP address on Wireless settings.
- 2. Access Node-Red interface using browser and server IP address e.g.

192.168.50.221:1880

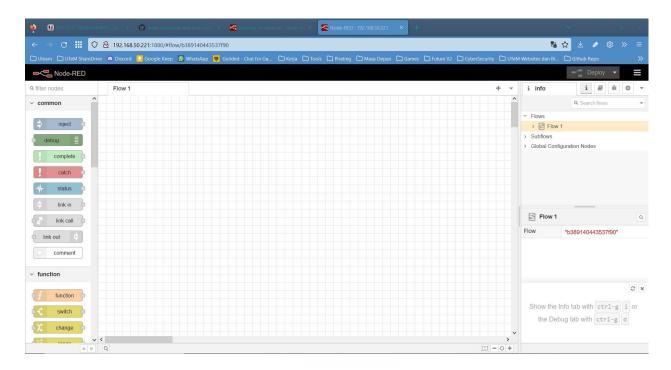
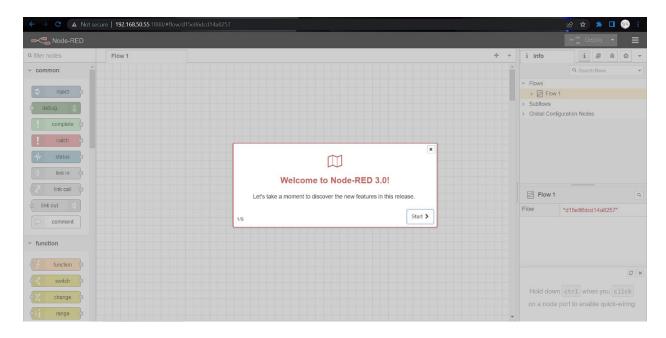


Figure 5 Node-Red Interface using Izham's IP and mobile phone server



 $Figure\ 6\ Node-Red\ Interface\ using\ Ahmad's\ IP\ and\ mobile\ phone\ server$

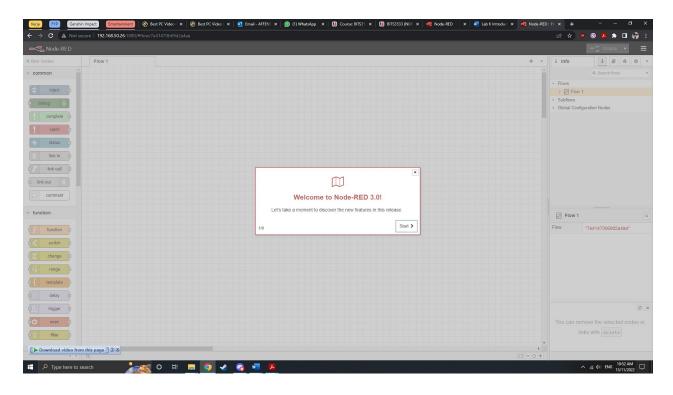


Figure 7 Node-Red Interface using Affendy's IP and mobile phone server