SISTEM KOMUNIKASI NIRKABEL
MODUL 4

RFID BLUETOOTH INTERNET OF THINGS BERBASIS PACKET TRACER

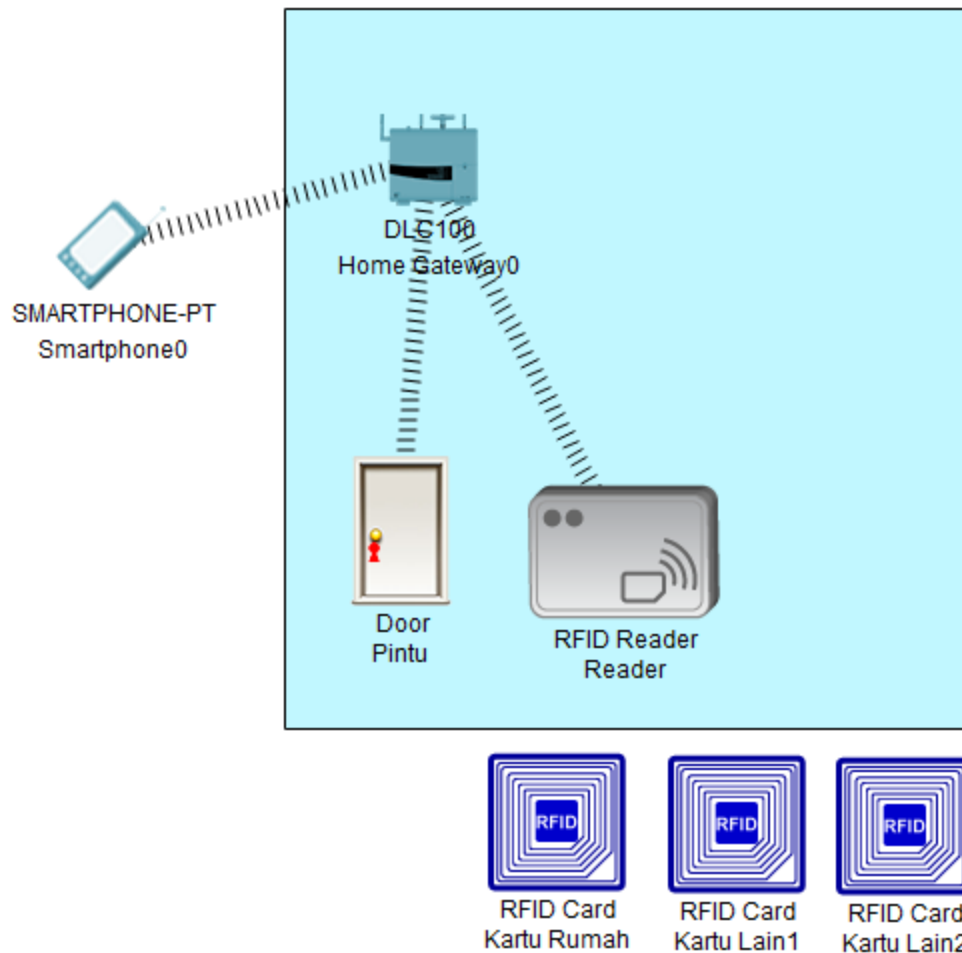Mochammad Zen Samsono Hadi, ST. MSc. Ph.D

D4 Teknik Telekomunikasi

TOPIK BAHASAN

- RFID Sensor
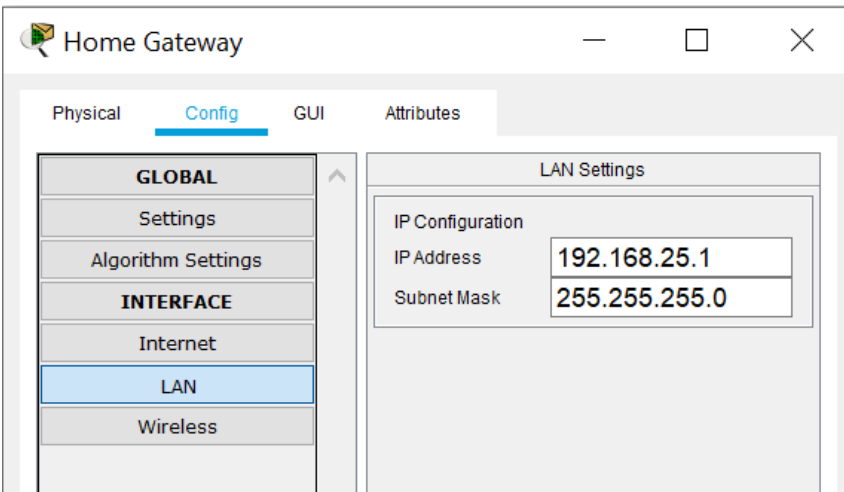- Bluetooth Pairing
- Bluetooth Beacon

RFID SENSOR

Topologi Jaringan
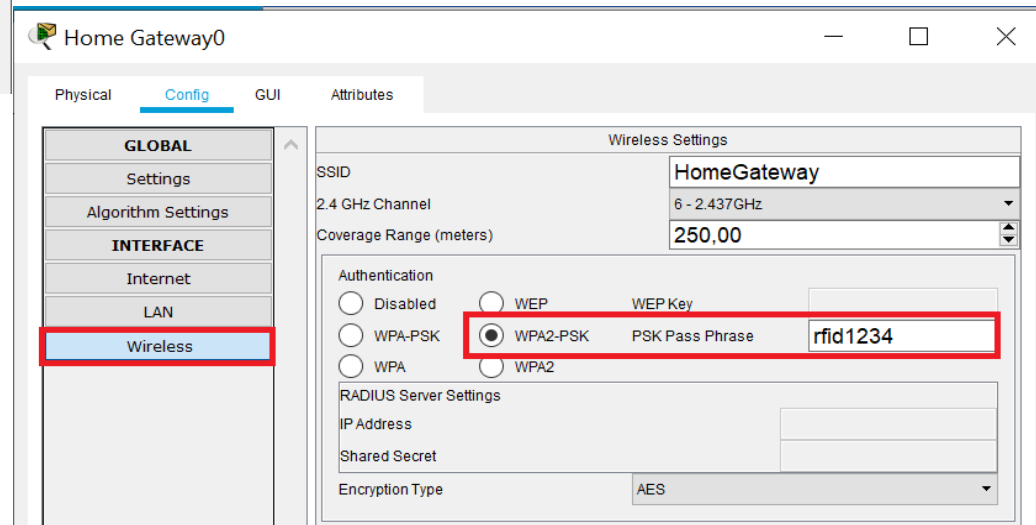
- Designlah jaringan seperti berikut:

Setting pada HomeGateway

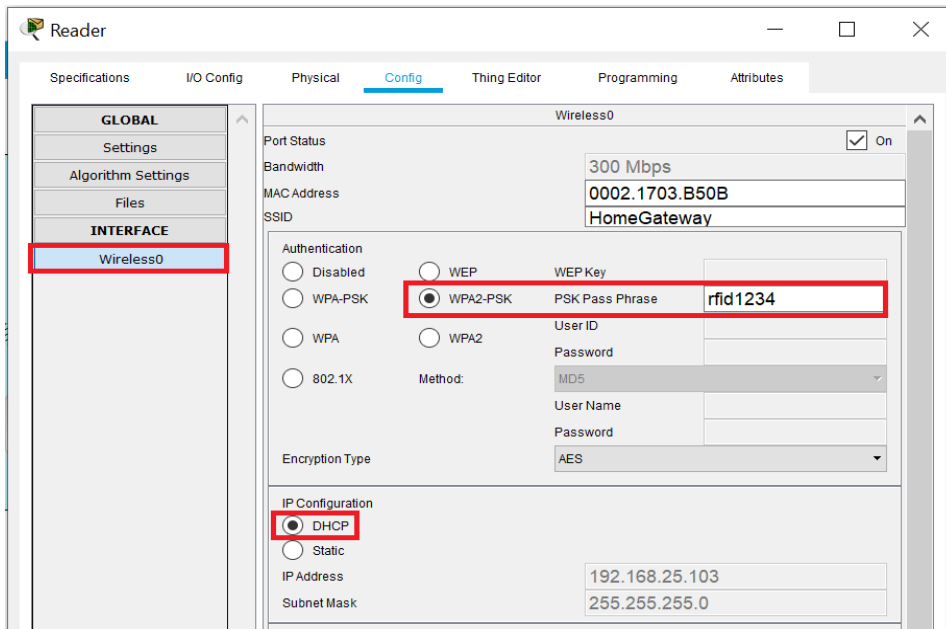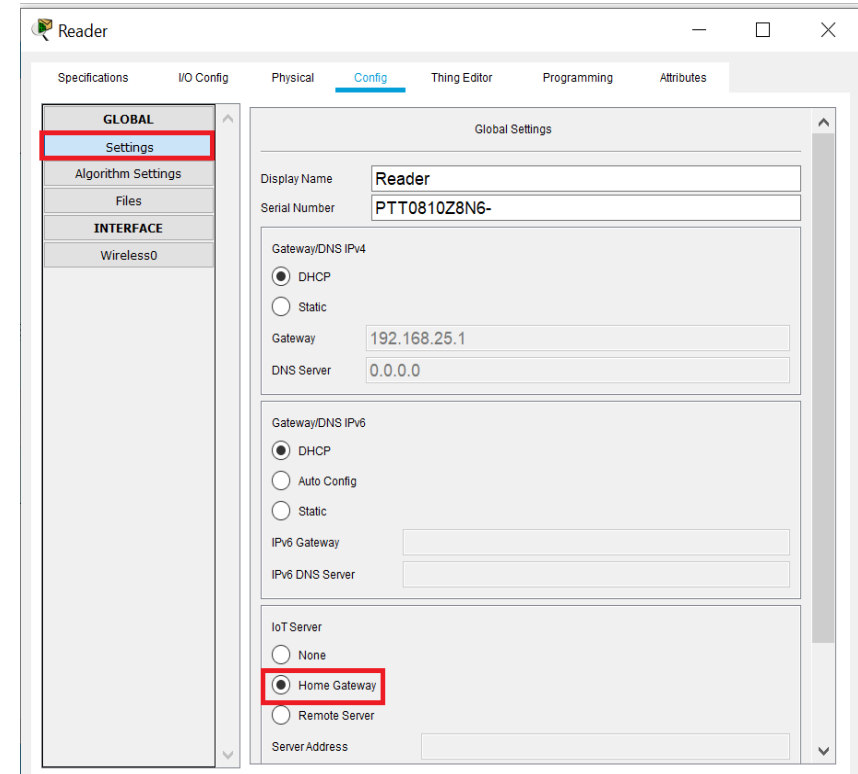## Setting IP Address (DHCP Server)

Setting WiFi & Security

Setting pada Perangkat Sensor IoT

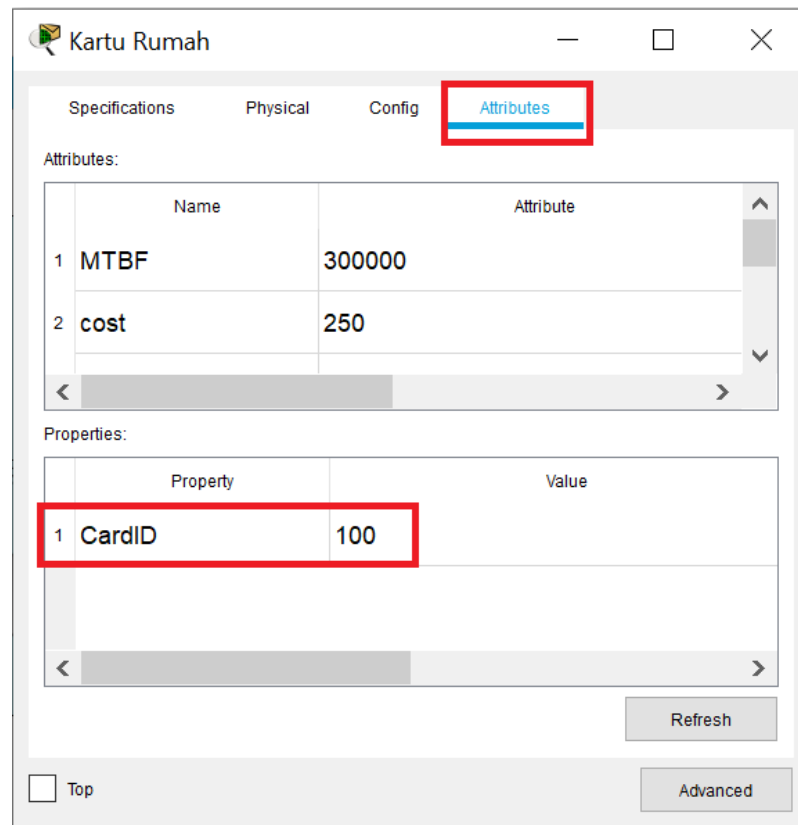Setting SSID dan passcode

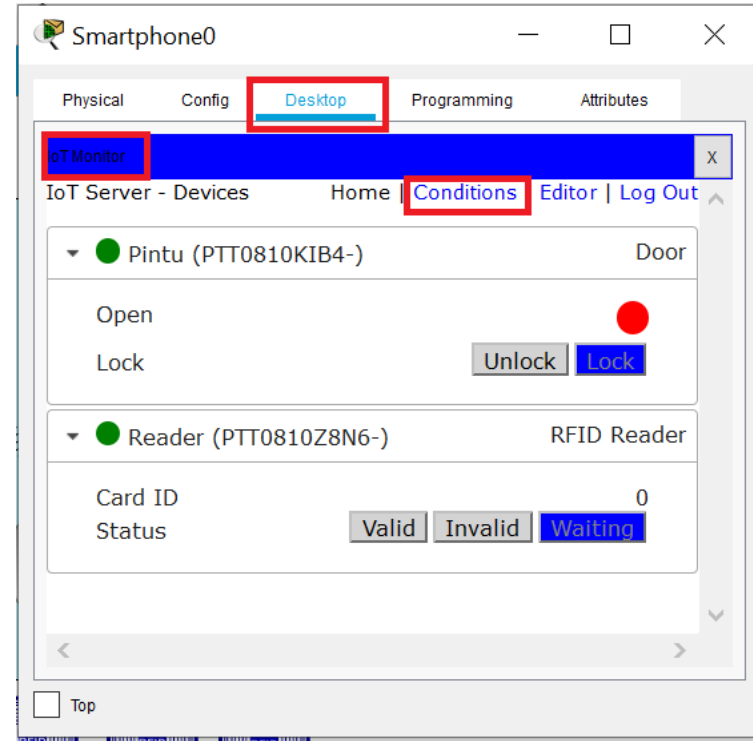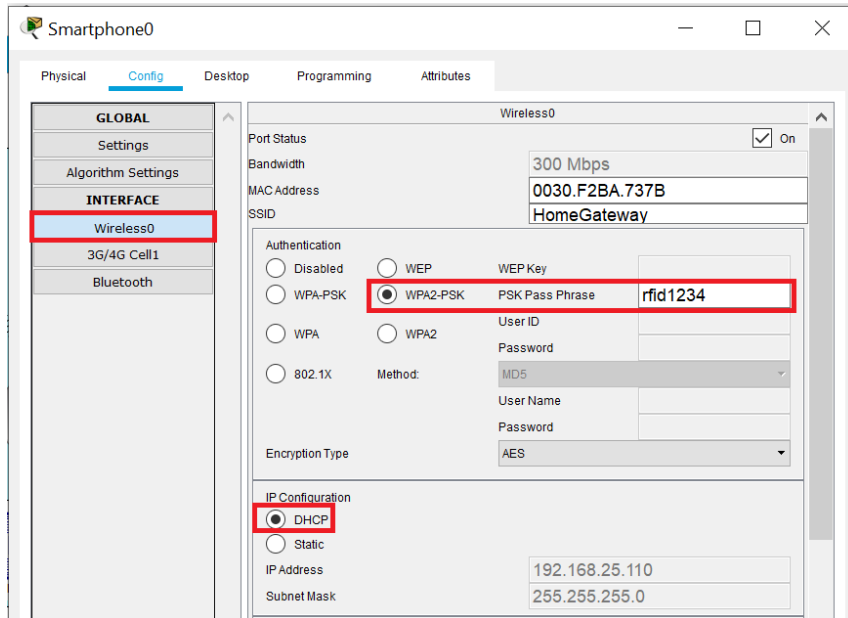Setting DHCP dan koneksi ke IoT Server

- Lakukan hal yang sama pada semua perangkat IoT

Setting RFID Card

- Pada Kartu Rumah untuk masuk, atur 100.
- Sedang lainnya gunakan default: 1001

Setting Aktuator (Kontrol) Perangkat IoT

Setting Aktuator (Kontrol) Perangkat IoT

Edit Rule

Name: RFID Open Door
Enabled ☑

If:
Match: All   + Condition   + Group
Reader   Status   is   Valid   -

Then set: + Action
Pintu   Lock   to   Unlock

Edit Rule

Name: RFID Lock Door
Enabled ☑

If:
Match: Any   + Condition   + Group
Reader   Status   is   Invalid   -
Reader   Status   is   Waiting   -

Then set: + Action
Pintu   Lock   to   Lock   -

Edit Rule

Name: RFID Key
Enabled ☑

If:
Match: All   + Condition   + Group
Reader   Card ID   =   100   -

Then set: + Action
Reader   Status   to   Valid   -

Pengujian Kontrol Perangkat IoT

Gunakan Kartu Rumah untuk membuka pintu, dan uji dengan kartu lainnya.

Kartu Rumah
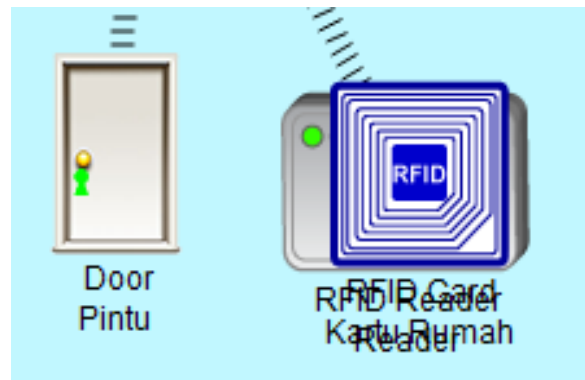
Kartu Lainnya
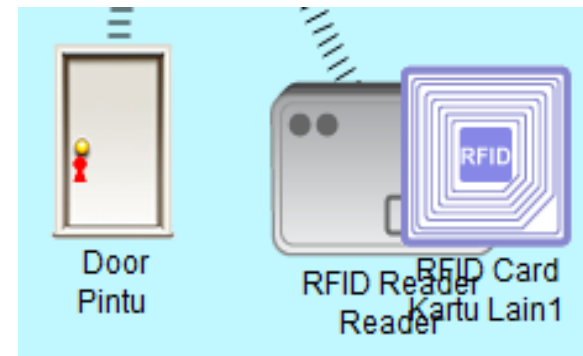
BLUETOOTH PAIRING

Topologi Jaringan

Pairing

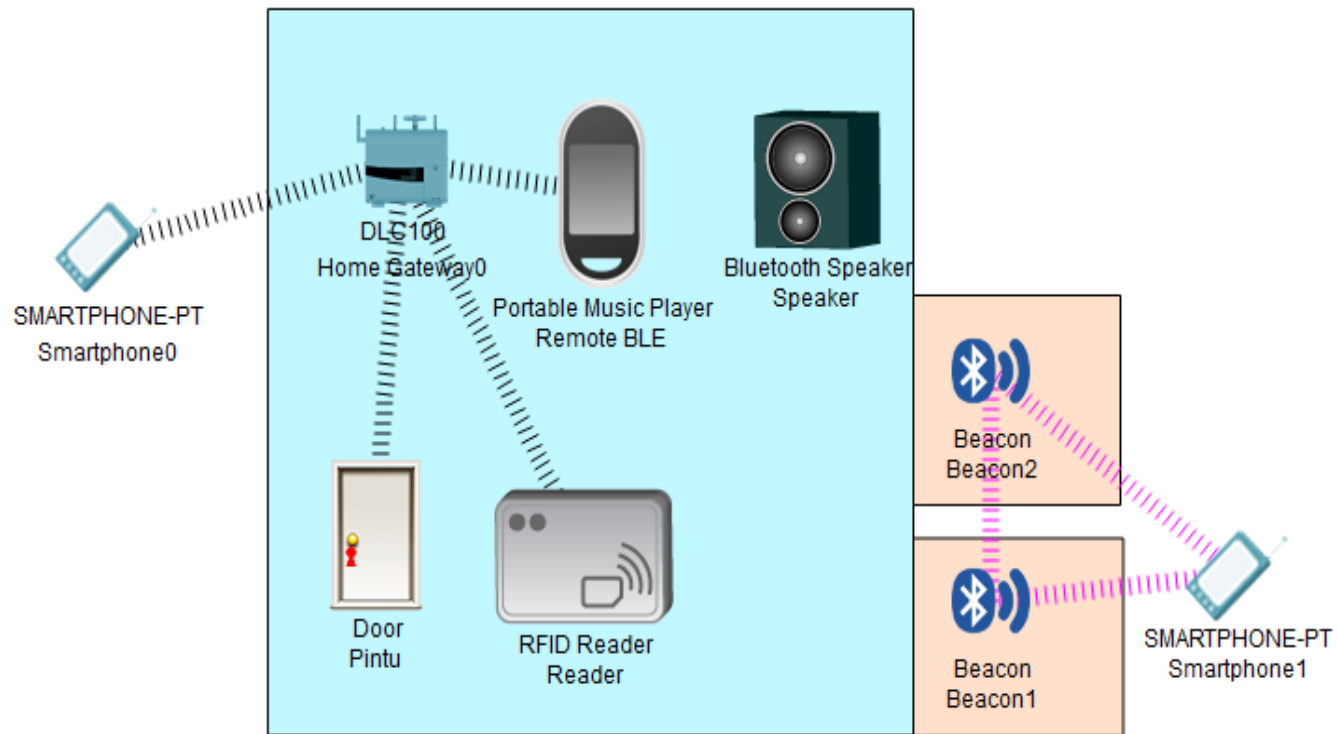# Pengujian

Tekan tombol On untuk membunyikan Bluetooth Speaker
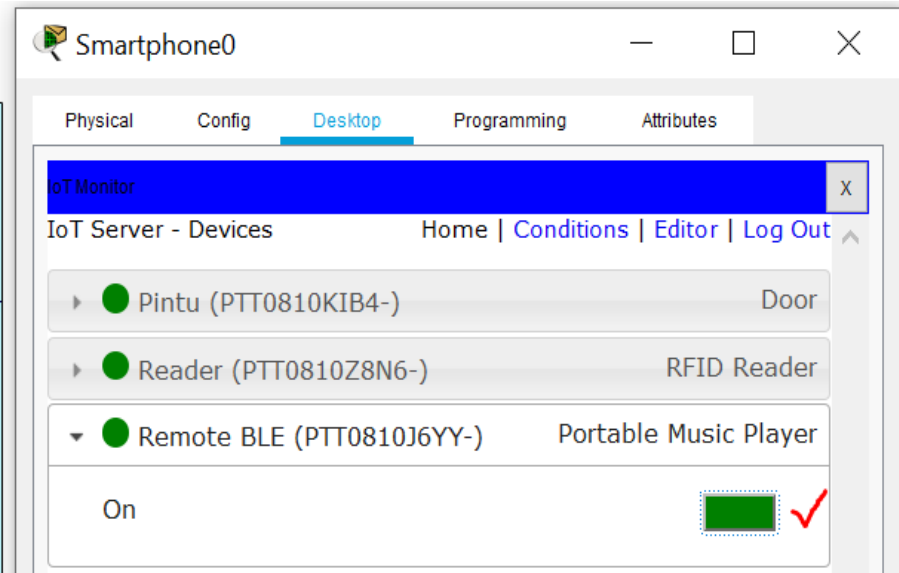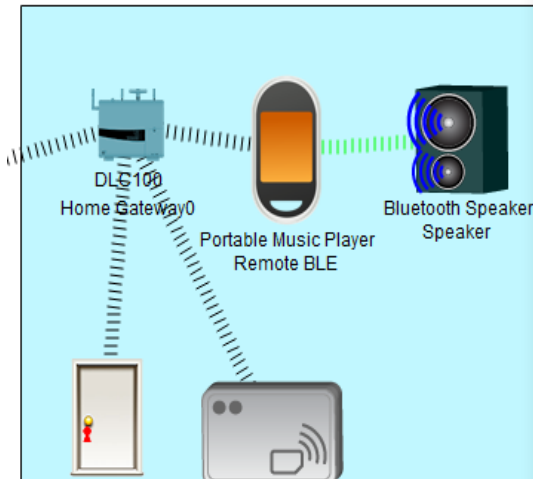
BLUETOOTH BEACON

Topologi Jaringan

Pengaturan Beacon

Pengaturan Smartphone

Pengujian

Integrasi Network

TUGAS

- Buatlah aplikasi berbasis RFID atau BLE Card
- Buatlah laporan resmi dengan melampirkan:
  - Desain dan penjelasannya di file word
  - Desain di packet tracer
  - Terakhir pengumpulan: hari Sabtu jam 23.59
- Upload di google drive