Smart Security System using Packet Tracer Project

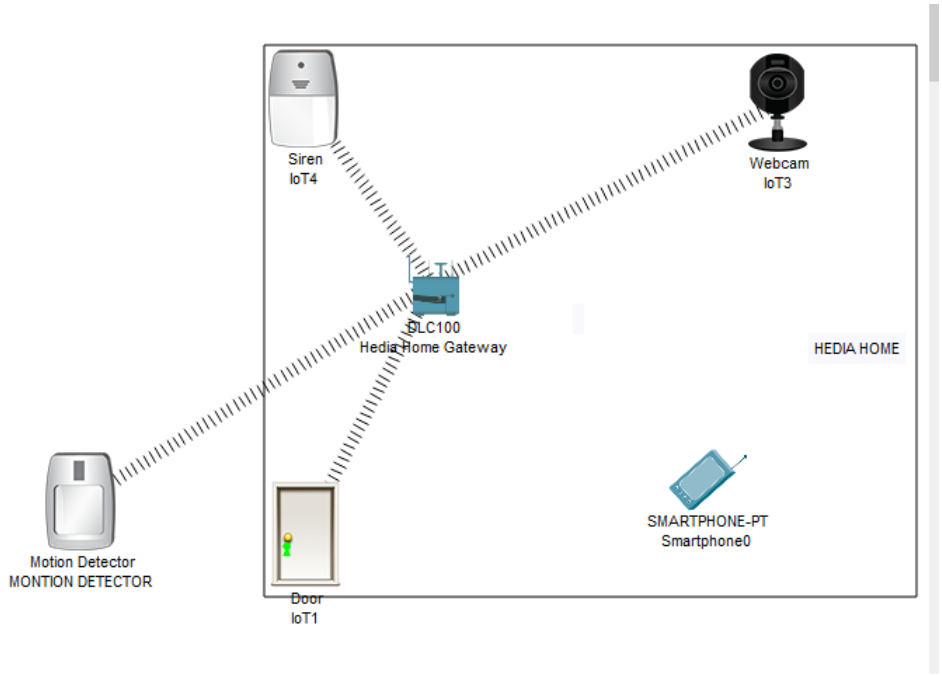
Description :

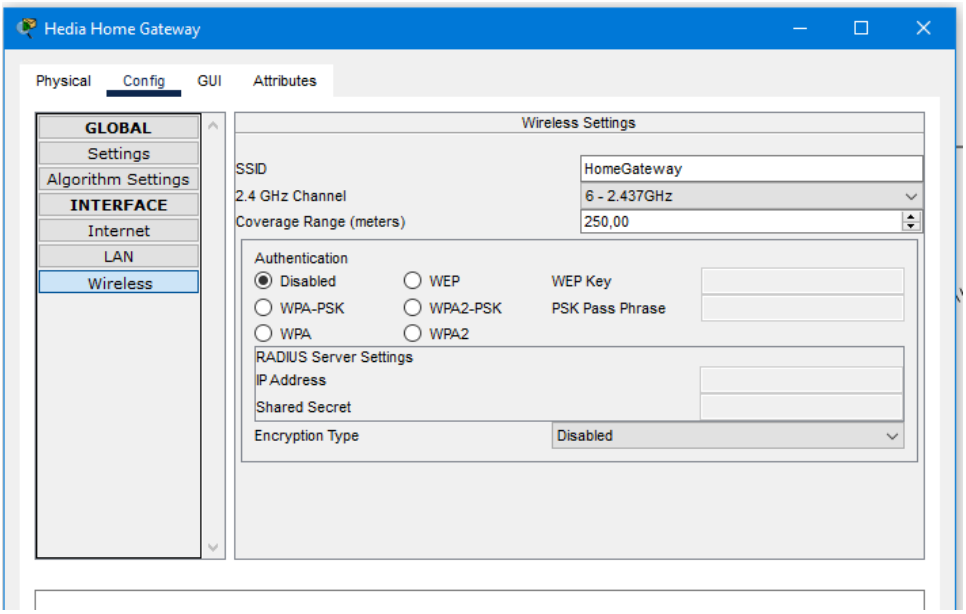
This project guides you in building a basic yet intelligent security alert system using Packet Tracer. With this system, you can easily detect individuals attempting to access a restricted area. Moreover, it offers you the freedom to decide whether to grant them access or not, providing you with control over the situation.

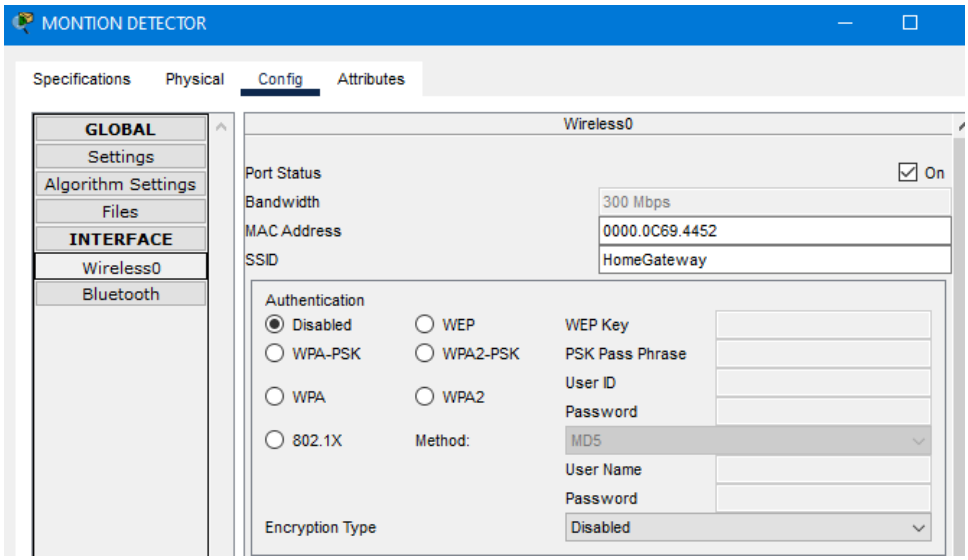
Gool :

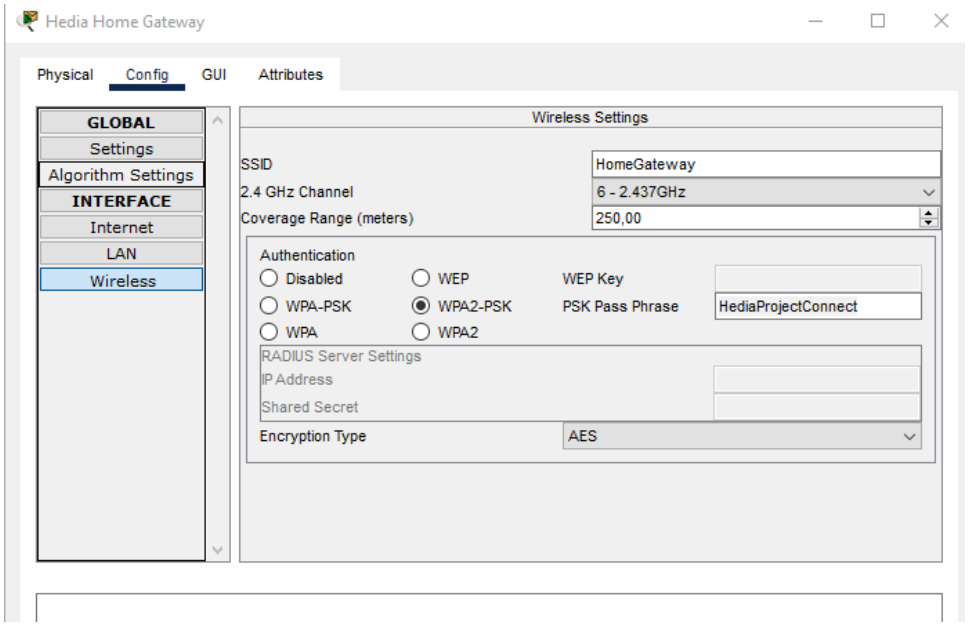
- Comprehend the concept of WPA2-PSK and learn how to set up its configuration.
- What is the rationale behind utilizing WPA2-PSK ?
- How does WPA2-PSK differ from WPA, WPA2, and WEP ?

1/ Comprehend the concept of WPA2-PSK and learn how to set up its configuration :




Hedia Home Gateway
Physical
Config
GUI
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
Internet
LAN
Wireless
Wireless Settings
SSID
HomeGateway
2.4 GHz Channel
6 - 2.437GHz
Coverage Range (meters)
250,00
Authentication
Disabled
WEP
WEP Key
WPA-PSK
WPA2-PSK
PSK Pass Phrase
WPA
WPA2
RADIUS Server Settings
IP Address
Shared Secret
Encryption Type
Disabled


MONTION DETECTOR
Specifications
Physical
Config
Attributes
GLOBAL
Settings
Algorithm Settings
Files
INTERFACE
Wireless0
Bluetooth
Wireless0
Port Status
On
Bandwidth
300 Mbps
MAC Address
0000.0C69.4452
SSID
HomeGateway
Authentication
Disabled
WEP
WEP Key
WPA-PSK
WPA2-PSK
PSK Pass Phrase
User ID
WPA
WPA2
Password
802.1X
Method:
MD5
User Name
Password
Encryption Type
Disabled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Wireless Settings
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WEP
WEP Key
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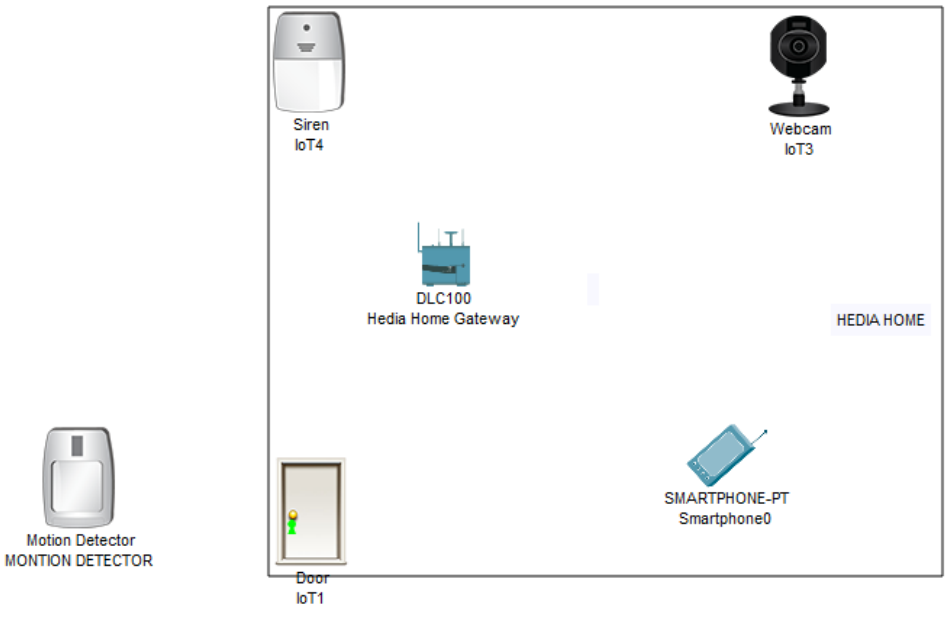
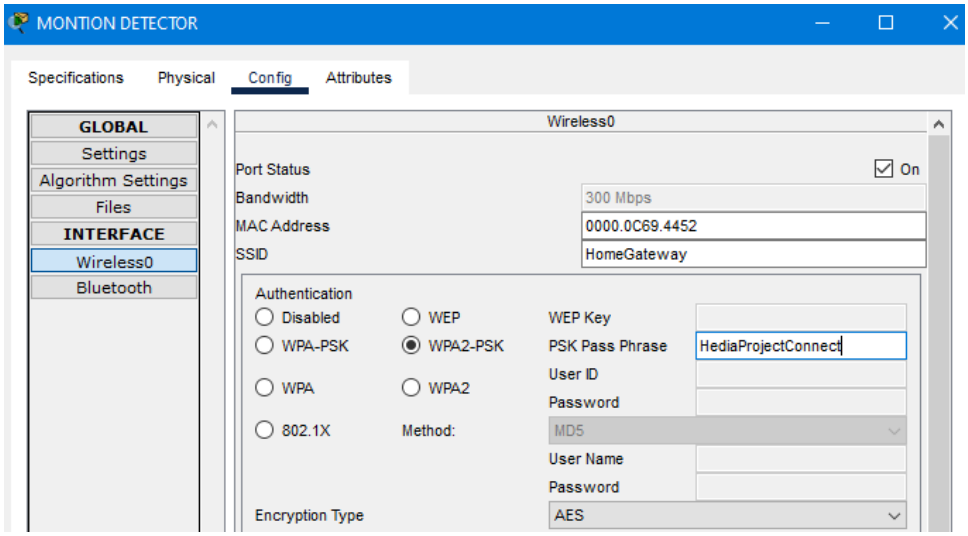
WPA2-PSK
PSK Pass Phrase
HediaProjectConnect
WPA
WPA2
RADIUS Server Settings
IP Address
Shared Secret
Encryption Type
AES


Siren
IoT4
Webcam
IoT3
DLC100
Hedia Home Gateway
HEDIA HOME
Motion Detector
MONTION DETECTOR
SMARTPHONE-PT
Smartphone0
Door
IoT1


MONTION DETECTOR
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GLOBAL
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Files
INTERFACE
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Bluetooth
Wireless0
Port Status
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MAC Address
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SSID
HomeGateway
Authentication
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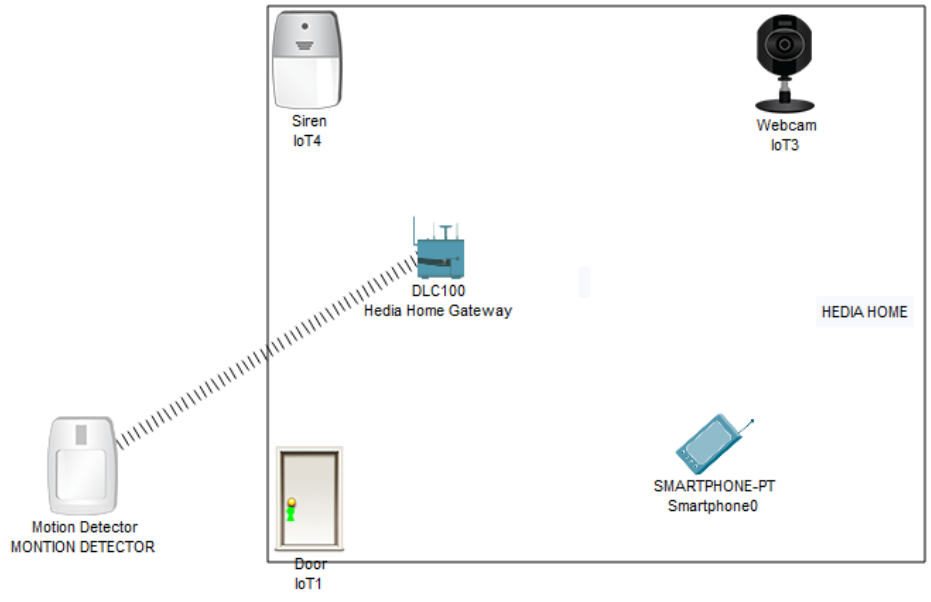
WEP
WEP Key
WPA-PSK
WPA2-PSK
PSK Pass Phrase
HediaProjectConnect
User ID
WPA
WPA2
Password
802.1X
Method:
MD5
User Name
Password
Encryption Type
AES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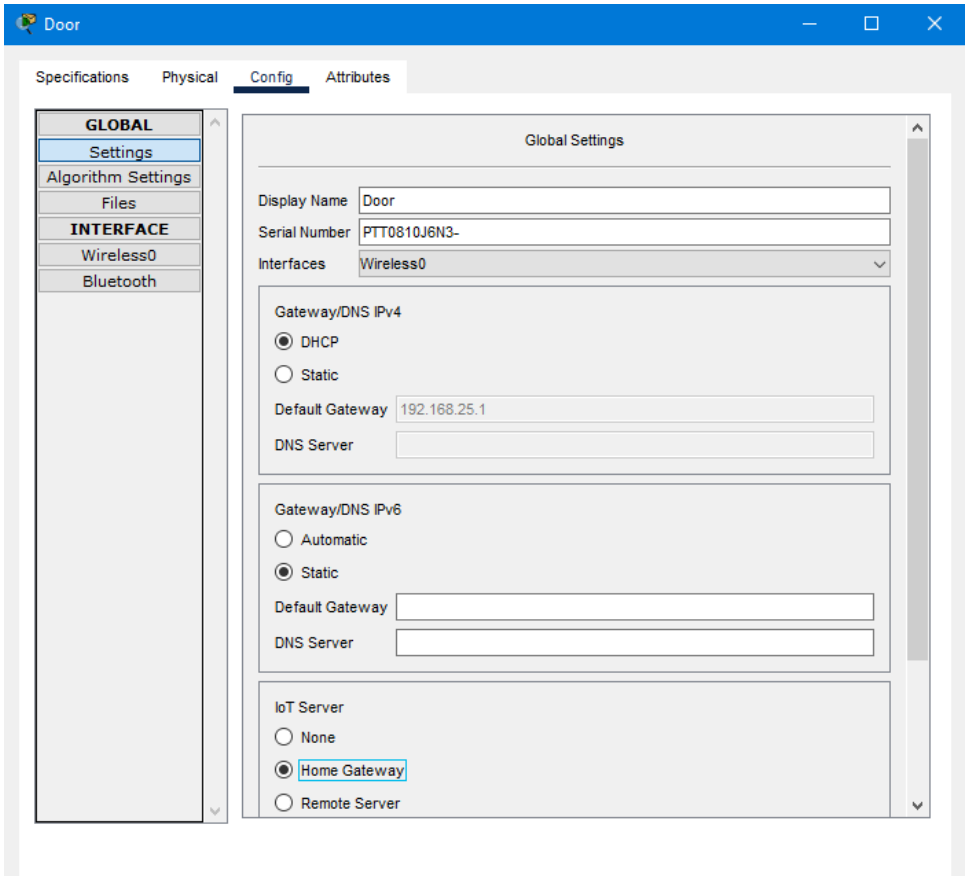
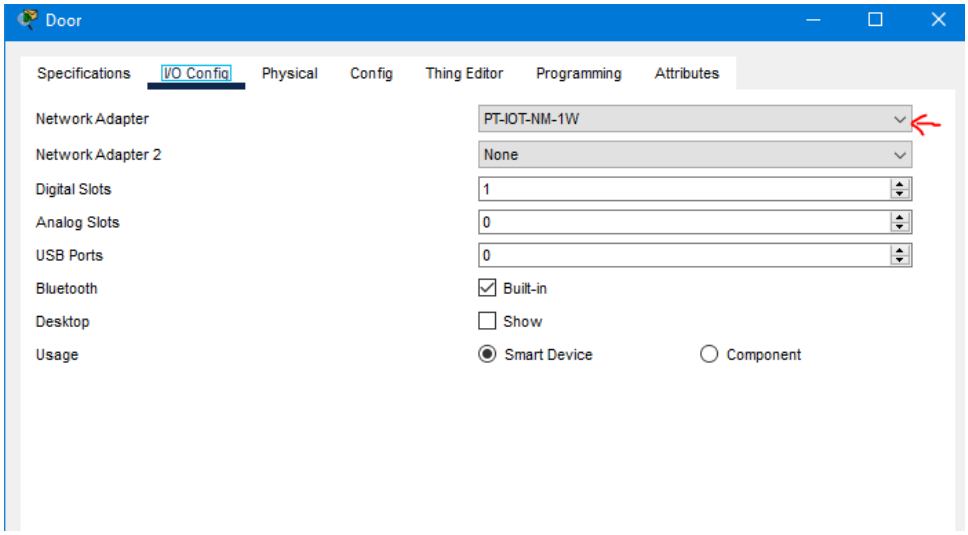
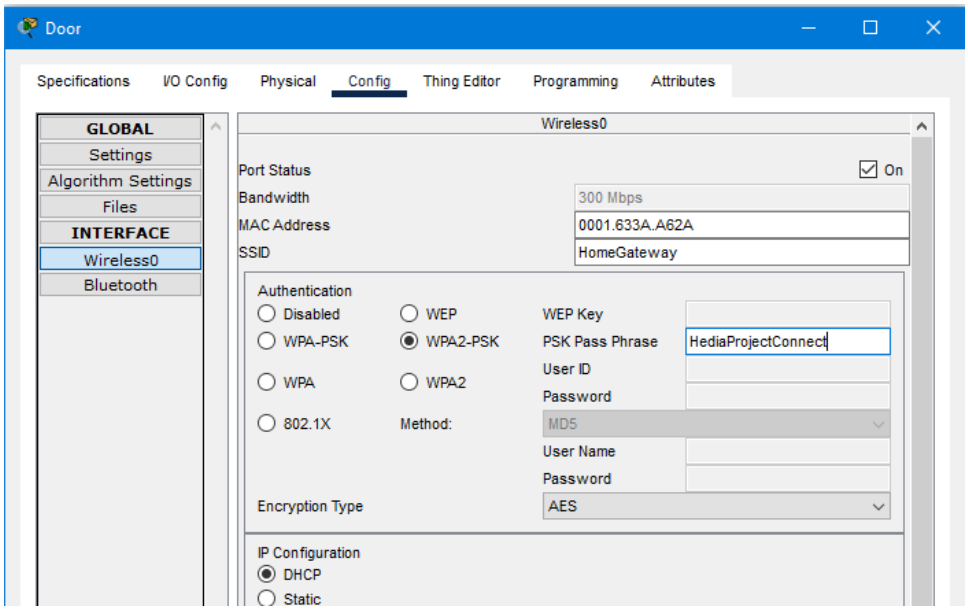

Door
Specifications
Physical
Config
Attributes
GLOBAL
Settings
Algorithm Settings
Files
INTERFACE
Wireless0
Bluetooth
Global Settings
Display Name
Door
Serial Number
PTT0810J6N3-
Interfaces
Wireless0
Gateway/DNS IPv4
DHCP
Static
Default Gateway
192.168.25.1
DNS Server
Gateway/DNS IPv6
Automatic
Static
Default Gateway
DNS Server
IoT Server
None
Home Gateway
Remote Server


Door
Specifications
I/O Config
Physical
Config
Thing Editor
Programming
Attributes
Network Adapter
PT-IOT-NM-1W
Network Adapter 2
None
Digital Slots
1
Analog Slots
0
USB Ports
0
Bluetooth
Built-in
Desktop
Show
Usage
Smart Device
Component


Door
Specifications
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Config
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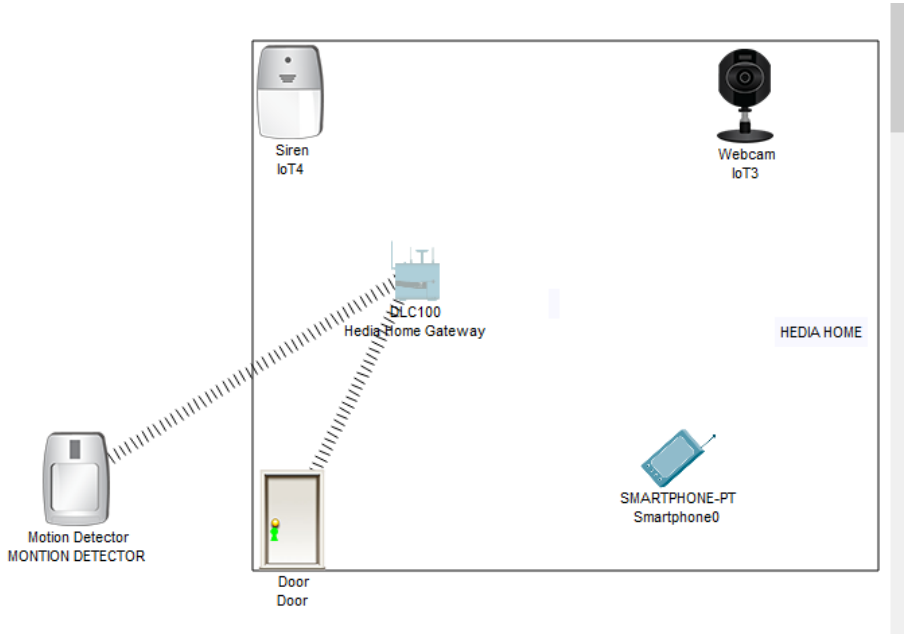
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
Files
INTERFACE
Wireless0
Bluetooth
Wireless0
Port Status
On
Bandwidth
300 Mbps
MAC Address
0001.633A.A62A
SSID
HomeGateway
Authentication
Disabled
WEP
WPA-PSK
WPA2-PSK
WPA
WPA2
802.1X
Method:
MD5
WEP Key
PSK Pass Phrase
HediaProjectConnect
User ID
Password
User Name
Password
Encryption Type
AES
IP Configuration
DHCP
Static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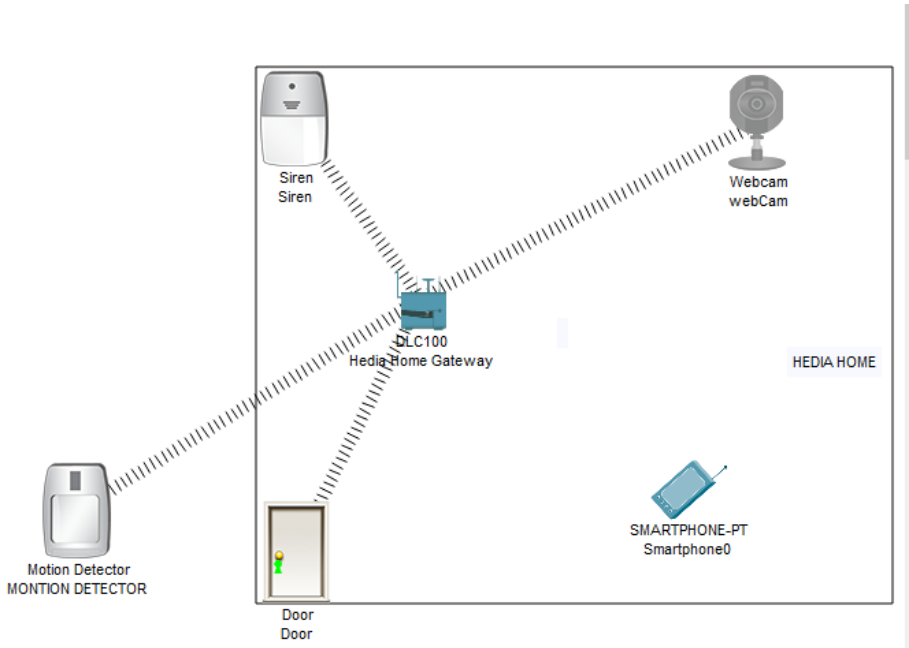
MONTION DETECTOR
SMARTPHONE-PT
Smartphone0
Door
Door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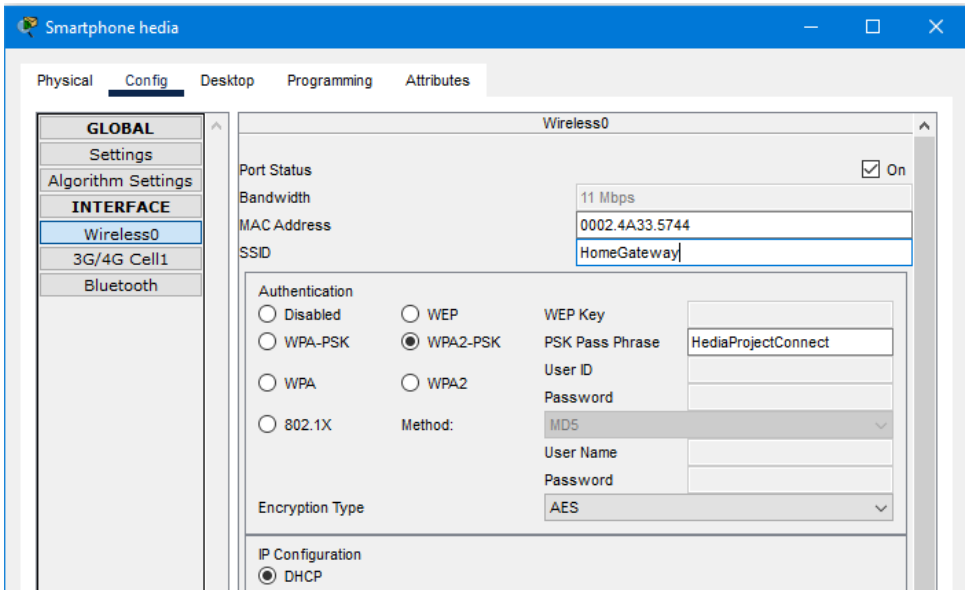
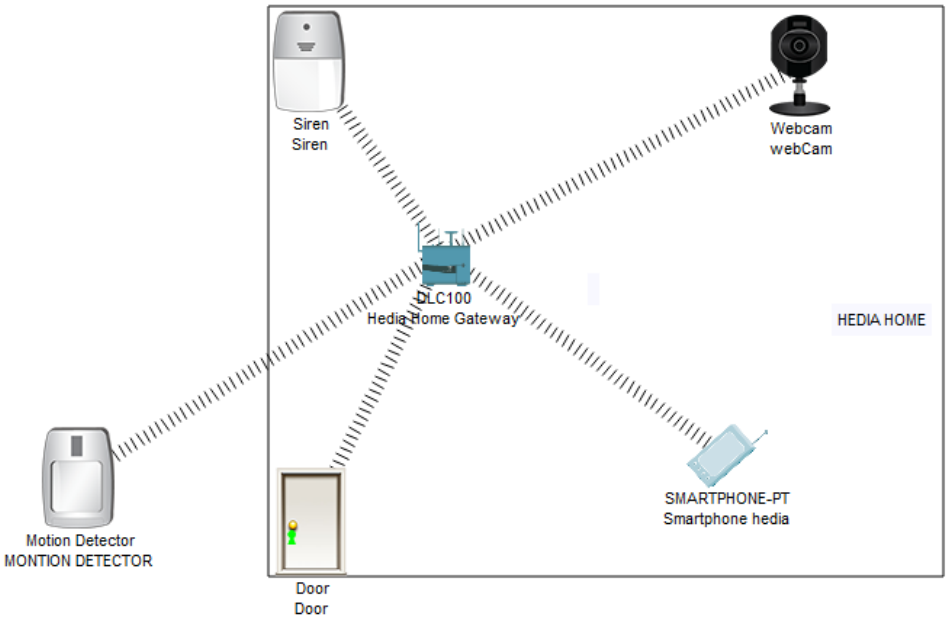
DLC100
Hedia Home Gateway
HEDIA HOME
Motion Detector
MONTION DETECTOR
SMARTPHONE-PT
Smartphone0
Door
Door


Smartphone hedia
Physical
Config
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
Wireless0
3G/4G Cell1
Bluetooth
Wireless0
Port Status
On
Bandwidth
11 Mbps
MAC Address
0002.4A33.5744
SSID
HomeGateway
Authentication
Disabled
WEP
WPA-PSK
WPA2-PSK
WPA
WPA2
802.1X
Method:
MD5
WEP Key
PSK Pass Phrase
HediaProjectConnect
User ID
Password
User Name
Password
Encryption Type
AES
IP Configuration
DHCP


Siren
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Smartphone hedia
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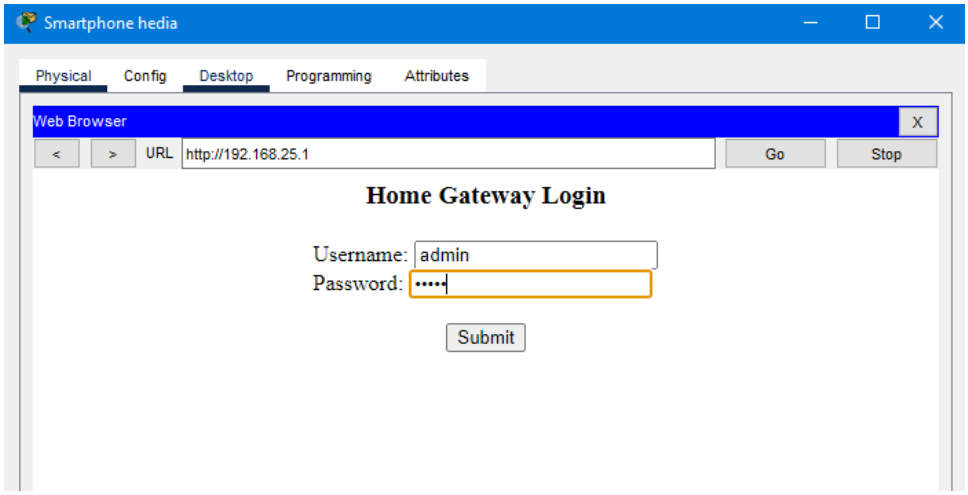
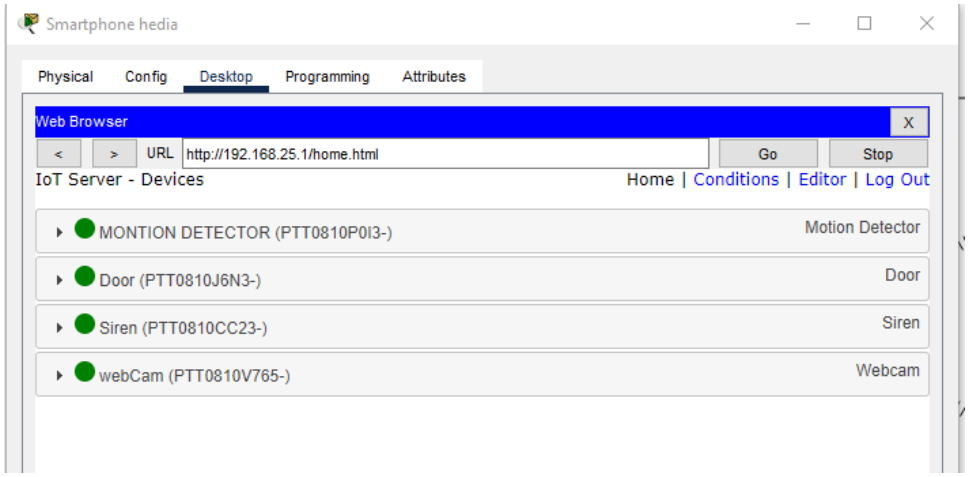
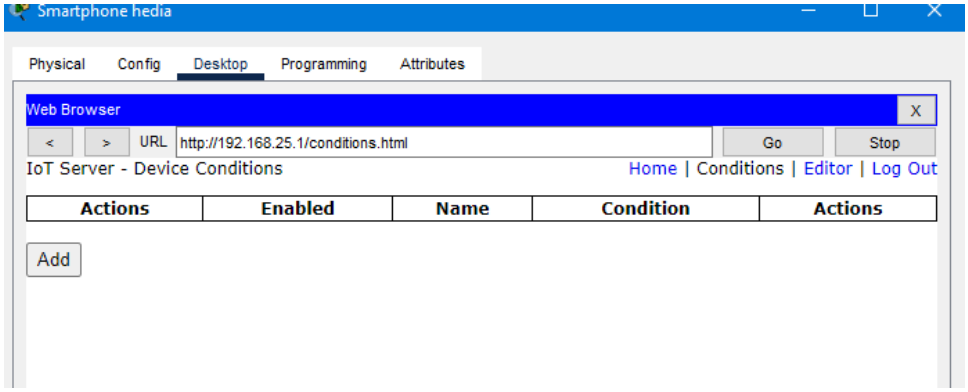
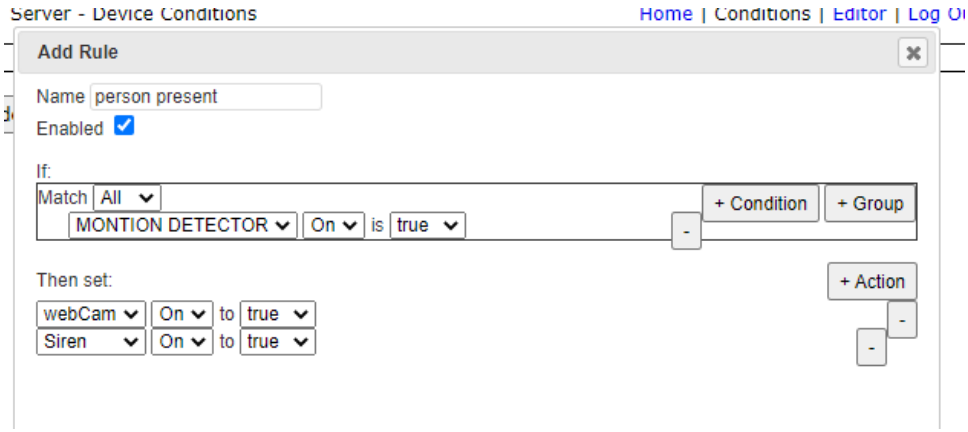
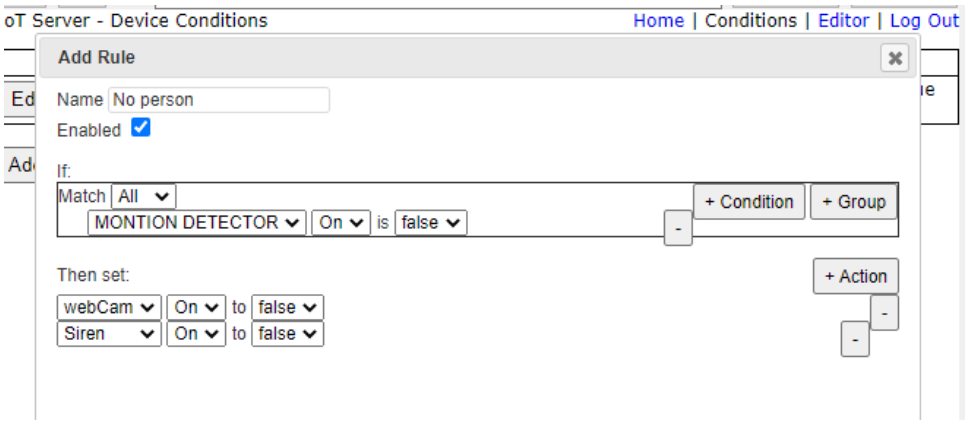
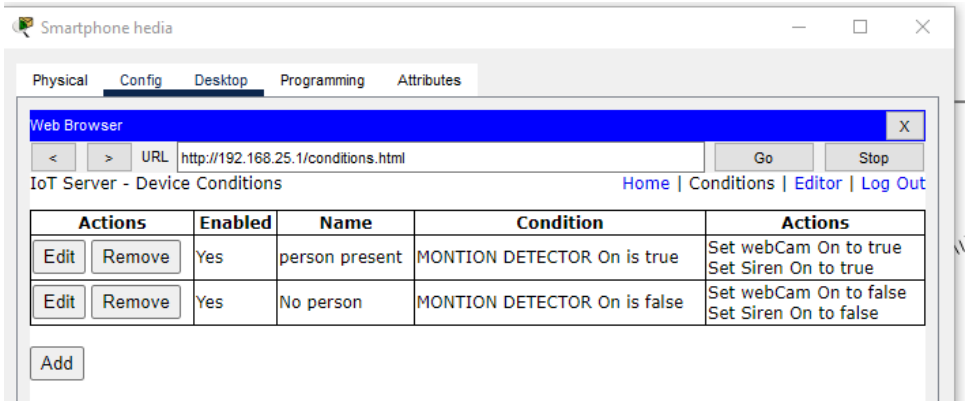

Smartphone hedia
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.25.1
Go
Stop
Home Gateway Login
Username: admin
Password: •••••
Submit


Smartphone hedia
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.25.1/home.html
Go
Stop
IoT Server - Devices
Home | Conditions | Editor | Log Out
MONTION DETECTOR (PTT0810P0I3-)
Motion Detector
Door (PTT0810J6N3-)
Door
Siren (PTT0810CC23-)
Siren
webCam (PTT0810V765-)
Webcam


Smartphone hedia
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.25.1/conditions.html
Go
Stop
IoT Server - Device Conditions
Home | Conditions | Editor | Log Out
Actions
Enabled
Name
Condition
Actions
Add


Server - Device Conditions
Home | Conditions | Editor | Log Ou
Add Rule
Name person present
Enabled
If:
Match All
MONTION DETECTOR On is true
+ Condition
+ Group
-
Then set:
+ Action
webCam On to true
Siren On to true
-
-


oT Server - Device Conditions
Home | Conditions | Editor | Log Out
Add Rule
Name No person
Enabled
If:
Match All
MONTION DETECTOR On is false
+ Condition
+ Group
-
Then set:
+ Action
webCam On to false
Siren On to false
-
-


Smartphone hedia
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.25.1/conditions.html
Go
Stop
IoT Server - Device Conditions
Home | Conditions | Editor | Log Out
Actions
Enabled
Name
Condition
Actions
Edit
Remove
Yes
person present
MONTION DETECTOR On is true
Set webCam On to true
Set Siren On to true
Edit
Remove
Yes
No person
MONTION DETECTOR On is false
Set webCam On to false
Set Siren On to false
Add