

MPDV Shop floor Documentation

Project Scope

This project involves the development of efficient office automation system based on biometric authentication with the following features:

- Facial recognition to input ID number of worker
- Automation of adding Hydra system personnel into facesec device

Compare_shopfloor.py	Code to sync the data of the hydra system and facesec device to add all personnel that is from the hydra system to facesec device
Main_shopfloor.py	Code to run to input ID number of worker into the hydra system when scan face

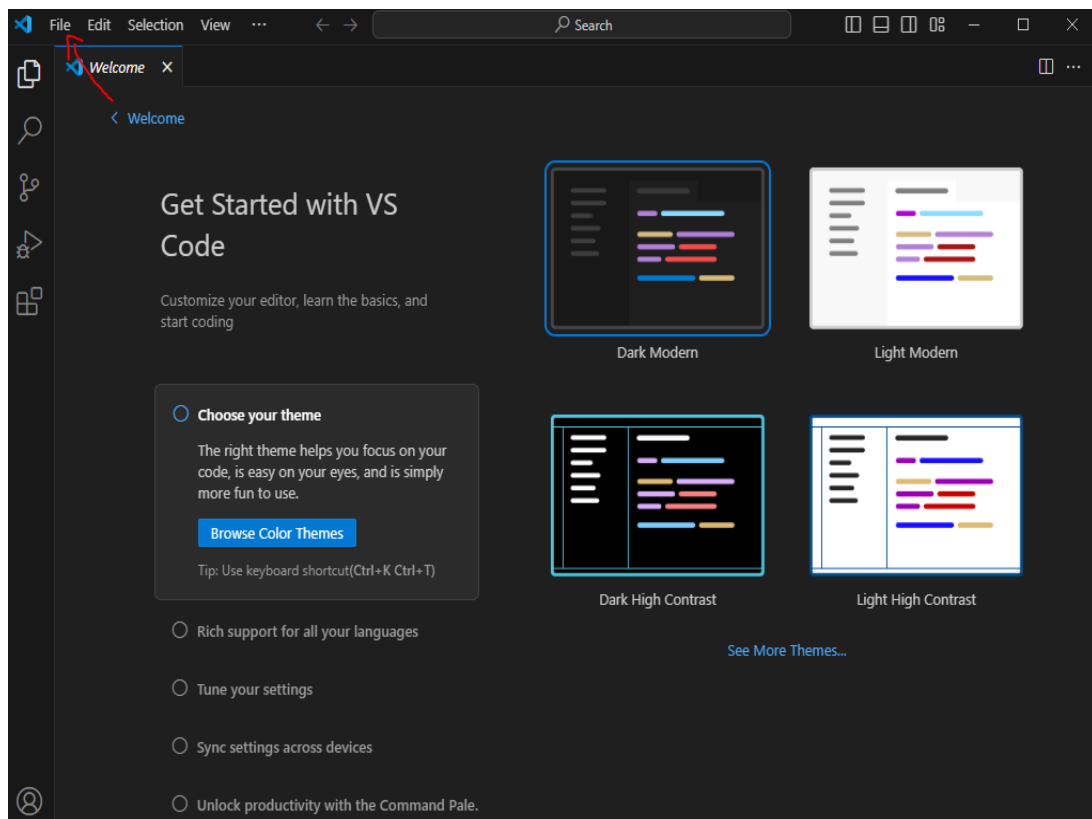
Prerequisites

- Make sure time on FaceSec matches your laptop (NTP doesn't work on NYP wifi)
- Make sure that all the devices are connected to the ethernet hub of HYDRA server in Manufacturing lab(S.124) using Lan Cable
- Download Vscode so that you can run the code

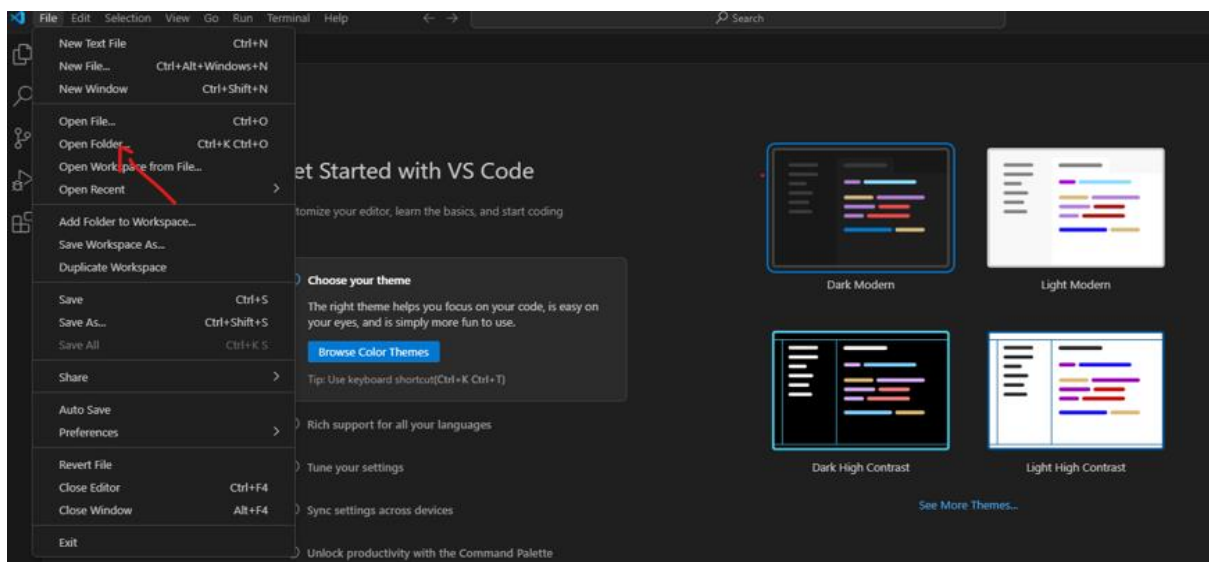
Running of script (Shop floor)

Importing and running code

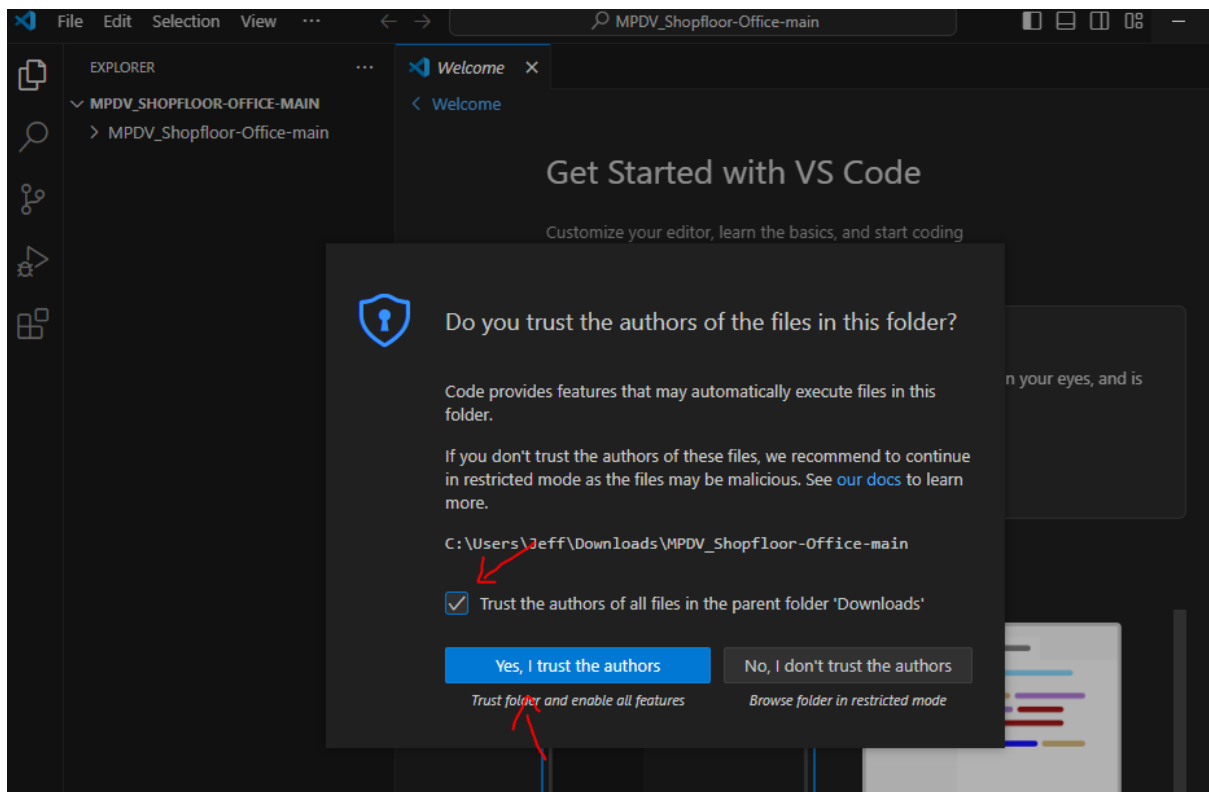
1. To import the codes, click the file button that is on the top of VsCode as show in the pictures below



2. Click on open folder and find the file path of the folder and click on it to import the codes



3. Tick the trust the author of all files and click yes i trust the author



4. Click on Main_shopfloor
5. Click on Terminal to download libraries needed to run
6. Pip install requests
7. Pip install websockets
8. .Pip install time
9. Pip install json
10. Pip install asyncio
11. .pip install socket
12. pip install paho-mqtt

```
File Edit Selection View Go Run Terminal Help
MPDV_Shopfloor-Office-main

EXPLORER
MPDV_SHOPFLOOR-OFFIC...
  MPDV_office
    > Client Script
    > Final Main Script (R...
    > Full Script Testing
    > testing
  MPDV_shopfloor
    > Final Main Script (R...
      > _pycache_
      > compare.cpython...
      > compare_shopflo...
      > main_shopfloor.py
    > Full script test
    > mqtt_testing
    > Testing

main_shopfloor.py
1 import asyncio
2 import json
3 import websockets
4 import requests
5 import paho.mqtt.client as mqtt
6 import time
7 import socket # Import socket library
8 from compare_shopfloor import compare
9
10 # Get the script start time in milliseconds
11 script_start_time = int(time.time() * 1000)
12
13 # Define sleep duration in seconds (24 hours = 86400 seconds)
14 SLEEP_DURATION = 86400 # Interval for syncing of data between FaceSec & HYDRA
15
16 def get_ip_address():
17     """Get the local IP address of the machine."""
18     s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
19     try:
20         # doesn't need to be reachable
21         s.connect(("8.8.8.8", 80))
```

```
PS C:\Users\Jeff\Downloads\MPDV_Shopfloor-Office-main\MPDV_Shopfloor-Office-main> pip install paho-mqtt
>>
```

13. Run main_shoopfloor.py by click on the arrow on top right

```
main_shopfloor.py X
MPDV_Shopfloor-Office-main > MPDV_shopfloor > Final Main Script (Run Main) > main_shopfloor.py > ...
1 import asyncio
2 import json
3 import websockets
4 import requests
5 import paho.mqtt.client as mqtt
```


14. CHANGE all IP in the links below to match FaceSec IP(From Compare_shopfloor.py)

```
compare_shopfloor.py X
MPDV_Shopfloor-Office-main > MPDV_shopfloor > Final Main Script (Run Main) > compare_shopfloor.py > ...
1 import json
2 import requests
3
4 # FaceSec API endpoints PLEASE CHANGE IP ADDRESSES to FaceSec IP
5 FACESEC_LOGIN_URL = "http://172.17.171.70:8081/api/account/login?password=2580"
6 FACESEC_PERSONS_URL = "http://172.17.171.70:8081/api/persons?size=100&page=0"
7 FACESEC_RULES_URL = "http://172.17.171.70:8081/api/rules"
8 FACESEC_ADD_PERSONNEL_URL = "http://172.17.171.70:8081/api/person"
9 FACESEC_UPLOAD_IMAGE_URL = "http://172.17.171.70:8081/api/upload/image"
10
```

change

15. Change it to how often you would like FaceSec & HYDRA to sync(from Main_shopfloor.py)

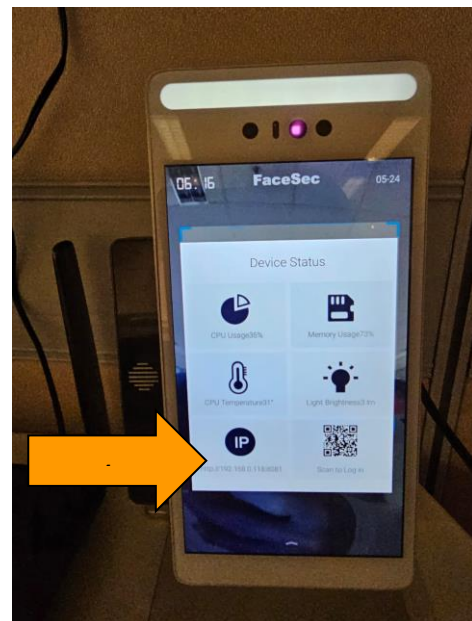
```
1  set_sleep_time = int(time.time() - 1000)
2  # Define sleep duration in seconds (24 hours = 86400 seconds)
3  SLEEP_DURATION = 86400 # For how often you would like FaceSec & HYDRA to sync
4
```



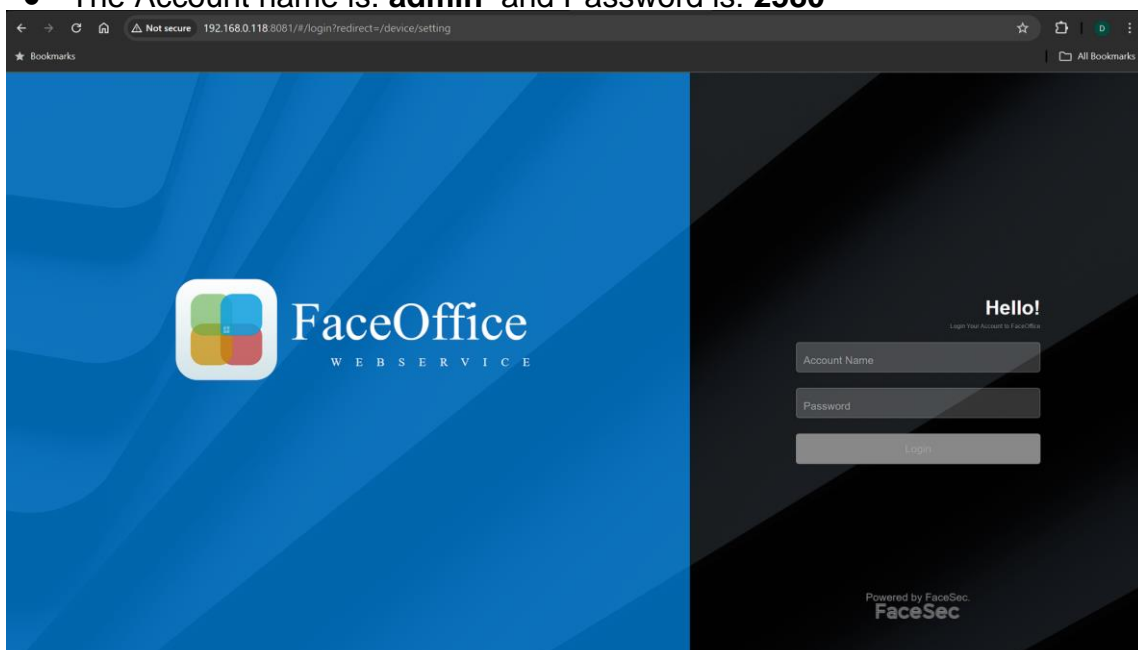
FaceSec Device

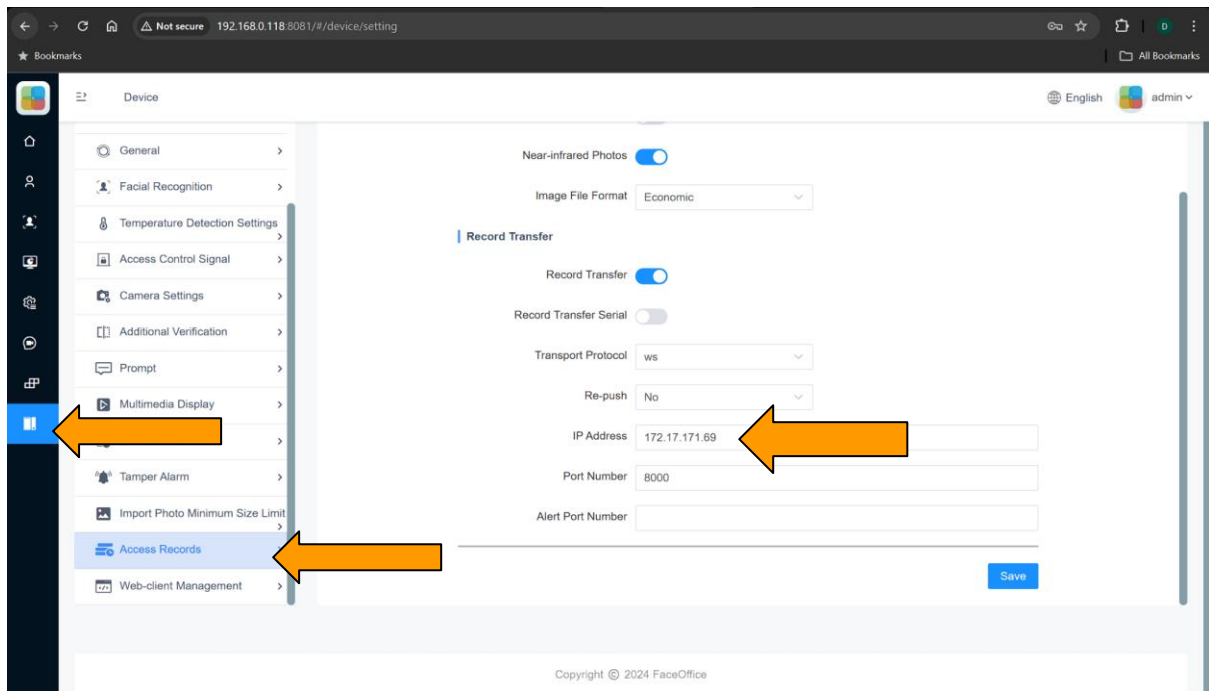
To configure wifi settings, follow the steps:

- Connect to the power plug and press the power button on the side to turn it on.
- It will connect to the wifi in the C4AI room if the router is turn on,if it is not, manually change the wifi to the C4AI_5GHz(name of wifi) wifi
- The password of the device is 2580
- To get to the web UI for FaceSec, click the 4th icon and type the url into your computer to access the web browser



- The Account name is: **admin** and Password is: **2580**





To add your face, press third icon & enter 2580> add personnel > fill in required fields (picture), name & no.

