#importing the required libraries

import cv2

import face\_recognition

import pandas as pd

from datetime import datetime

import os

import pyautogui

import time

#capture the video from default camera

webcam\_video\_stream = cv2.VideoCapture(0)

#load the sample images and get the 128 face embeddings from them

vasanthi\_image = face\_recognition.load\_image\_file('images/samples/vasanthi.jpg')

vasanthi\_face\_encodings = face\_recognition.face\_encodings(vasanthi\_image)[0]

valli\_image = face\_recognition.load\_image\_file('images/samples/valli.jpg')

valli\_face\_encodings = face\_recognition.face\_encodings(valli\_image)[0]

upendra\_image = face\_recognition.load\_image\_file('images/samples/Upendra.jpg')

upendra\_face\_encodings = face\_recognition.face\_encodings(upendra\_image)[0]

yogi\_image = face\_recognition.load\_image\_file('images/samples/yogi-min.jpg')

yogi\_face\_encodings = face\_recognition.face\_encodings(yogi\_image)[0]

#save the encodings and the corresponding labels in seperate arrays in the same order

known\_face\_encodings = [vasanthi\_face\_encodings, valli\_face\_encodings, upendra\_face\_encodings, yogi\_face\_encodings]

known\_face\_names = ["vasanthi", "Sri valli", "Upendra kumar","yogi"]

#initialize the array variable to hold all face locations, encodings and names

all\_face\_locations = []

all\_face\_encodings = []

all\_face\_names = []

attendance\_list= []

#loop through every frame in the video

while True:

#get the current frame from the video stream as an image

ret,current\_frame = webcam\_video\_stream.read()

#resize the current frame to 1/4 size to proces faster

current\_frame\_small = cv2.resize(current\_frame,(0,0),fx=0.25,fy=0.25)

#detect all faces in the image

#arguments are image,no\_of\_times\_to\_upsample, model

all\_face\_locations = face\_recognition.face\_locations(current\_frame\_small,number\_of\_times\_to\_upsample=1,model='hog')

#detect face encodings for all the faces detected

all\_face\_encodings = face\_recognition.face\_encodings(current\_frame\_small,all\_face\_locations)

#looping through the face locations and the face embeddings

for current\_face\_location,current\_face\_encoding in zip(all\_face\_locations,all\_face\_encodings):

#splitting the tuple to get the four position values of current face

top\_pos,right\_pos,bottom\_pos,left\_pos = current\_face\_location

#change the position maginitude to fit the actual size video frame

top\_pos = top\_pos\*4

right\_pos = right\_pos\*4

bottom\_pos = bottom\_pos\*4

left\_pos = left\_pos\*4

#find all the matches and get the list of matches

all\_matches = face\_recognition.compare\_faces(known\_face\_encodings, current\_face\_encoding)

#string to hold the label

name\_of\_person = 'Unknown face'

#check if the all\_matches have at least one item

#if yes, get the index number of face that is located in the first index of all\_matches

#get the name corresponding to the index number and save it in name\_of\_person

if True in all\_matches:

first\_match\_index = all\_matches.index(True)

name\_of\_person = known\_face\_names[first\_match\_index]

if name\_of\_person not in attendance\_list:

now = datetime.now()

date\_time = now.strftime("%H:%M:%S")

attendance\_list.append(name\_of\_person)

attendance\_list.append(date\_time)

#draw rectangle around the face

cv2.rectangle(current\_frame,(left\_pos,top\_pos),(right\_pos,bottom\_pos),(255,0,0),2)

#to display thr name

font = cv2.FONT\_HERSHEY\_DUPLEX

cv2.putText(current\_frame, name\_of\_person, (left\_pos,bottom\_pos), font, 1, (34,34,178),1)

#display the video

cv2.imshow("Webcam Video",current\_frame)

if cv2.waitKey(1) & 0xFF == ord('q'):

break

webcam\_video\_stream.release()

cv2.destroyAllWindows()

def Attendace(arr):

df = pd.DataFrame()

# Creating two columns

df['NAME'] = attendance\_list[0::2]

df['TIME'] = attendance\_list[1::2]

df.to\_excel(r'C:\Users\91824\Desktop\result.xlsx', index=False)

Attendace(attendance\_list)

students = pd.read\_excel(r"C:\Users\91824\Desktop\StudDb.xlsx")

attendees = pd.read\_excel(r"C:\Users\91824\Desktop\result.xlsx")

left\_join\_df = attendees.merge(students, how="left", on="NAME")

left\_join\_df.to\_excel(r"C:\Users\91824\Desktop\MailFile.xlsx")

os.startfile(r"C:\Users\91824\Documents\UiPath\MailTest2\mailAuto.xaml")

time.sleep(300)

pyautogui.press("F6")