



REAL TIME FACE ATTENDANCE SYSTEM

Face recognition is a biometric recognition technique. Biometric recognition is an information system that allows the identification of a person based on some of its main physiological and behavioural characteristics. Face recognition is a broad problem of identifying or verifying people in photographs and videos, a process comprised of detection, alignment, feature extraction, and a recognition task.

STEP 1 : DOWNLOAD THE SOURCE CODE (Valid for 7 Days to download)

Download source code (click on below buttons)

[Download Source Code](#)[YouTube Video](#)

and un-zip

After successful unzip, folder structure will be look like as below

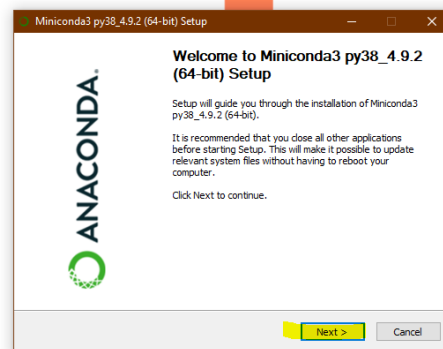
This PC > Downloads > face_attendance				
Name	Date modified	Type	Size	
.idea	19-03-2020 02:50 PM	File folder		
Attendance	23-04-2021 01:53 AM	File folder		
StudentDetails	24-03-2020 10:13 AM	File folder		
TrainingImage	24-03-2020 10:13 AM	File folder		
TrainingImageLabel	19-03-2020 02:50 PM	File folder		
AMS_Run	23-04-2021 01:54 AM	PY File	28 KB	
haarcascade_frontalface_alt	23-03-2020 01:45 PM	XML File	661 KB	
haarcascade_frontalface_default	23-03-2020 01:45 PM	XML File	909 KB	
retrain	23-03-2020 01:45 PM	PY File	54 KB	
testing	23-03-2020 01:45 PM	PY File	1 KB	
training code	23-03-2020 01:45 PM	Text Document	1 KB	
training	23-03-2020 01:45 PM	PY File	2 KB	

STEP 2 : DOWNLOAD MINICONDA FROM BELOW LINK

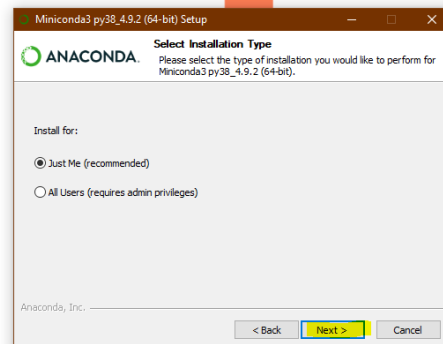
Download Miniconda

After downloading, double click on setup file and install

Extrinsic
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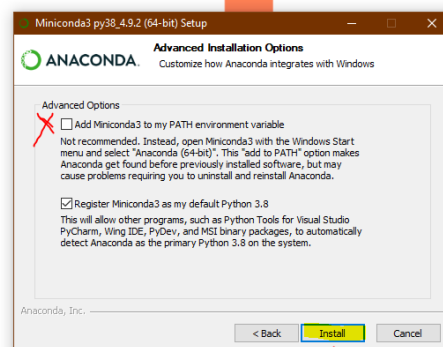


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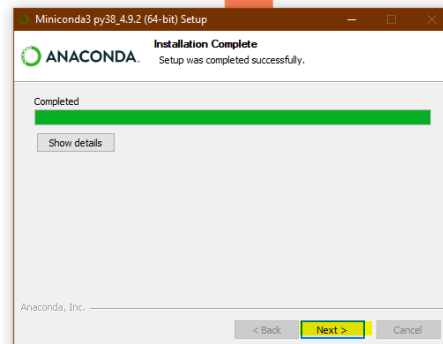


Do **not** tick the checkbox

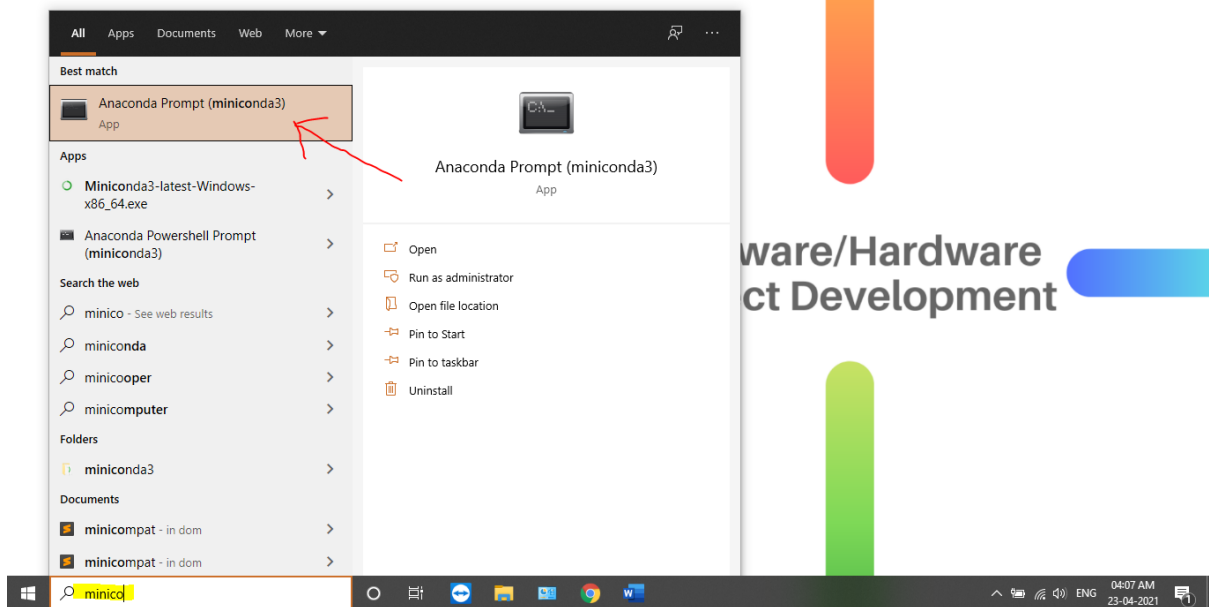
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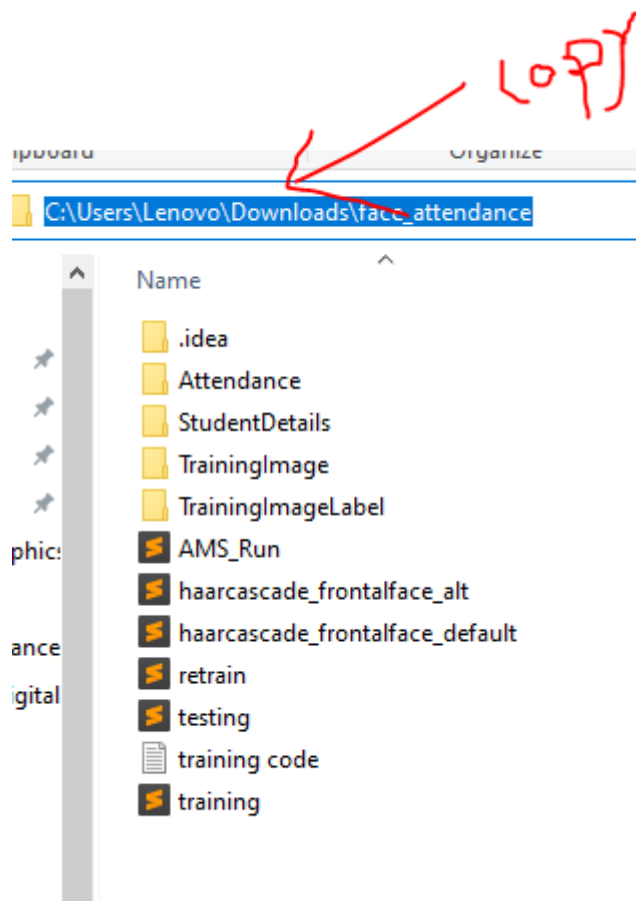


Step 3 : Launch Miniconda/Anaconda PROMPT and Navigate to the project folder





Copy the path of source code as shown below



Paste the path in Ananconda prompt with typing cd

CD C:\Users\Lenovo\Downloads\face_attendance



(Above path can be different for you, so copy only that path where your project stored)

```
Anaconda Prompt (miniconda3)

(base) C:\Users\Lenovo>cd C:\Users\Lenovo\Downloads\face_attendance_
```

Hit Enter.

```
Anaconda Prompt (miniconda3)

(base) C:\Users\Lenovo>cd C:\Users\Lenovo\Downloads\face_attendance
(base) C:\Users\Lenovo\Downloads\face_attendance>
```

Step 4 : Install Required packages by using below command (copy paste)

Pip install opencv-python pillow pandas opencv-contrib-python pymysql

```
Anaconda Prompt (miniconda3)

(base) C:\Users\Lenovo\Downloads\face_attendance>Pip install opencv-python pillow pandas opencv-contrib-python pymysql
```

Hit enter

In my system these packages are already installed so you will get different installation window. Don't panic, it will be same

```
(base) C:\Users\Lenovo\Downloads\face_attendance>Pip install opencv-python pillow pandas opencv-contrib-python pymysql
Requirement already satisfied: opencv-python in c:\users\lenovo\miniconda3\lib\site-packages (4.5.1.48)
Requirement already satisfied: pillow in c:\users\lenovo\miniconda3\lib\site-packages (8.2.0)
Requirement already satisfied: pandas in c:\users\lenovo\miniconda3\lib\site-packages (1.2.4)
Requirement already satisfied: opencv-contrib-python in c:\users\lenovo\miniconda3\lib\site-packages (4.5.1.48)
Requirement already satisfied: pymysql in c:\users\lenovo\miniconda3\lib\site-packages (1.0.2)
Requirement already satisfied: numpy>=1.17.3 in c:\users\lenovo\miniconda3\lib\site-packages (from opencv-python) (1.20.2)
Requirement already satisfied: python-dateutil>=2.7.3 in c:\users\lenovo\miniconda3\lib\site-packages (from pandas) (2.8.1)
Requirement already satisfied: pytz>=2017.3 in c:\users\lenovo\miniconda3\lib\site-packages (from pandas) (2021.1)
Requirement already satisfied: six>=1.5 in c:\users\lenovo\miniconda3\lib\site-packages (from python-dateutil>=2.7.3->pandas) (1.15.0)

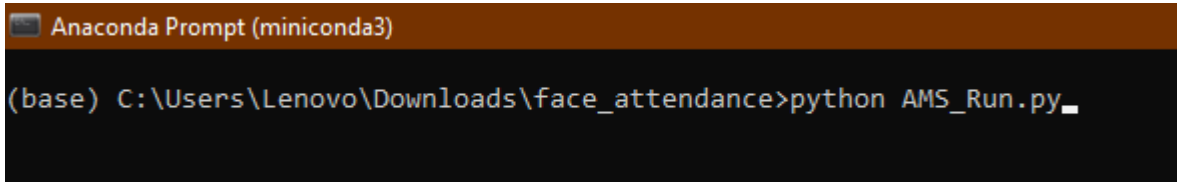
(base) C:\Users\Lenovo\Downloads\face_attendance>
```

Step 5 : Launch the Actual Application

Run command

Python AMS_Run.py

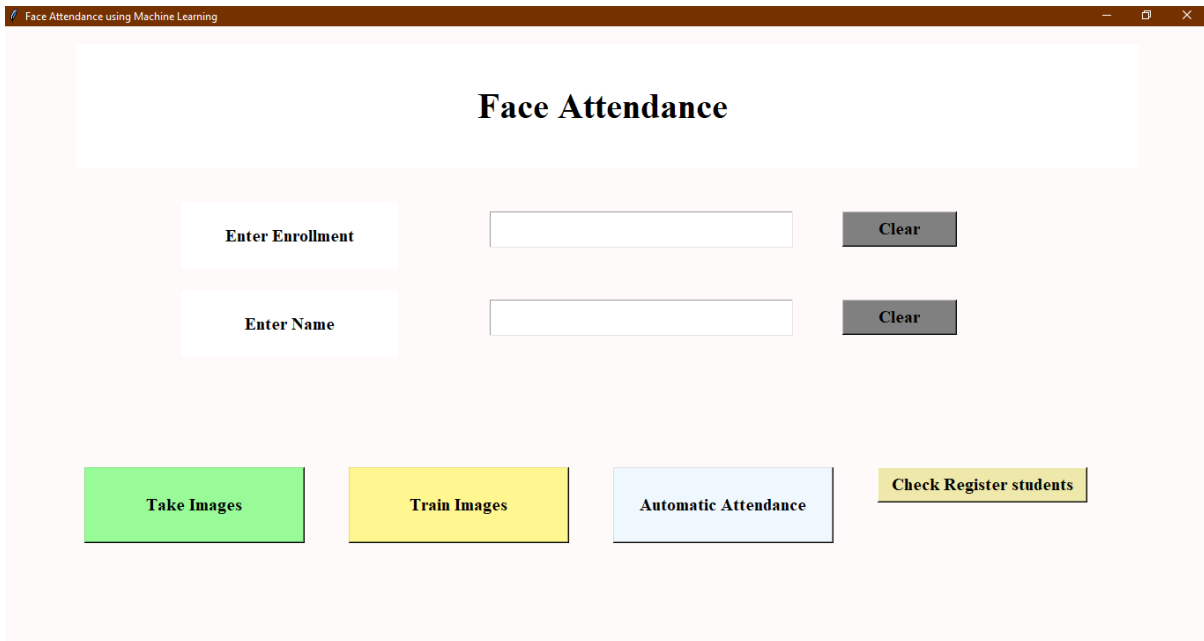
Hit enter



```
Anaconda Prompt (miniconda3)

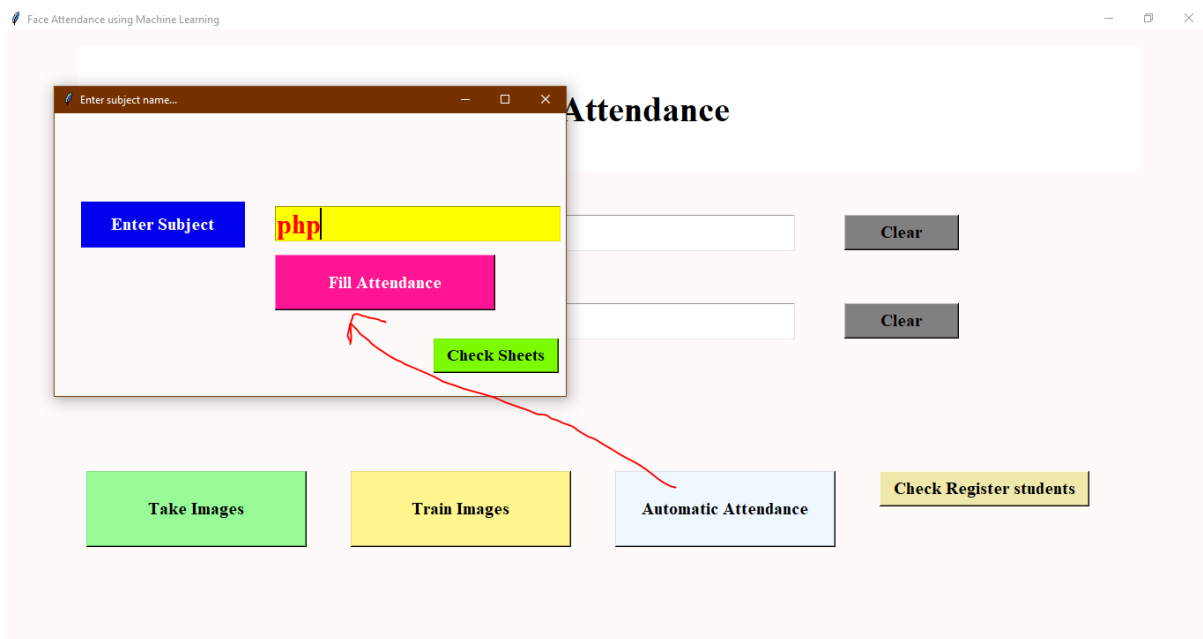
(base) C:\Users\Lenovo\Downloads\face_attendance>python AMS_Run.py_
```

Python Tkinter UI page will open automatically

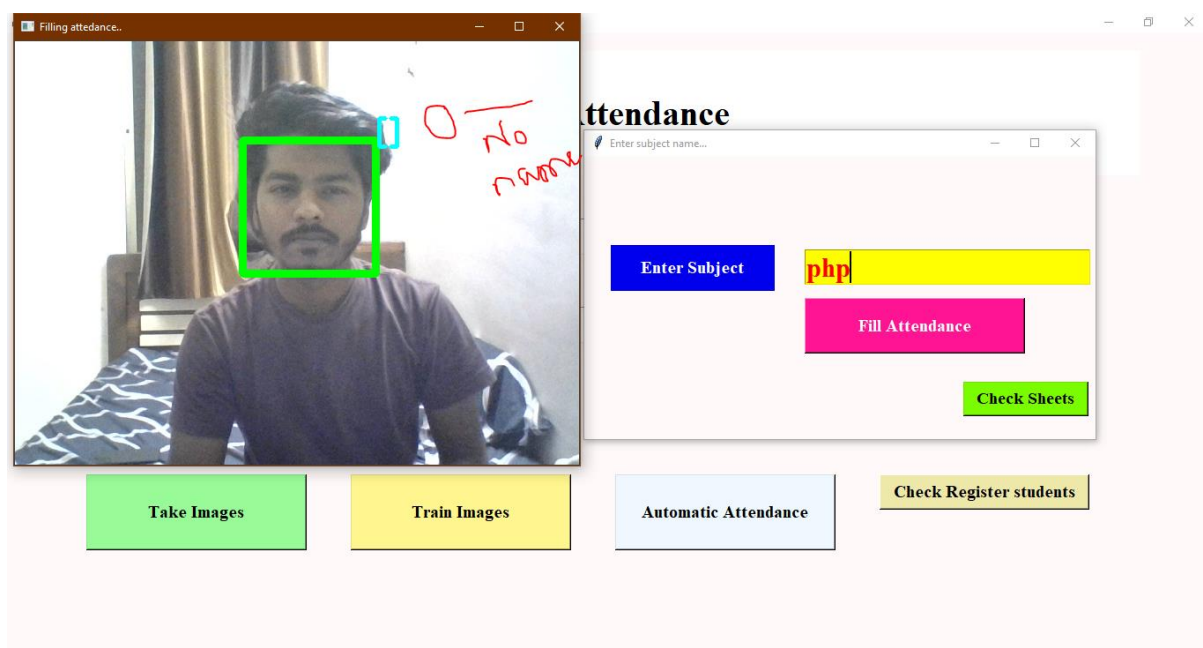


The screenshot shows a Python Tkinter application window titled "Face Attendance using Machine Learning". The window has a light pink background and a white title bar. At the top, there is a white rectangular box containing the text "Face Attendance" in bold black font. Below this, there are two input sections. The first section has a label "Enter Enrollment" in a white box, followed by a white text input field, and a grey "Clear" button. The second section has a label "Enter Name" in a white box, followed by a white text input field, and a grey "Clear" button. At the bottom of the window, there are four buttons: "Take Images" (green), "Train Images" (yellow), "Automatic Attendance" (light blue), and "Check Register students" (yellow with a black border).

Click on Automatic Attendance and check your name should not be come first.



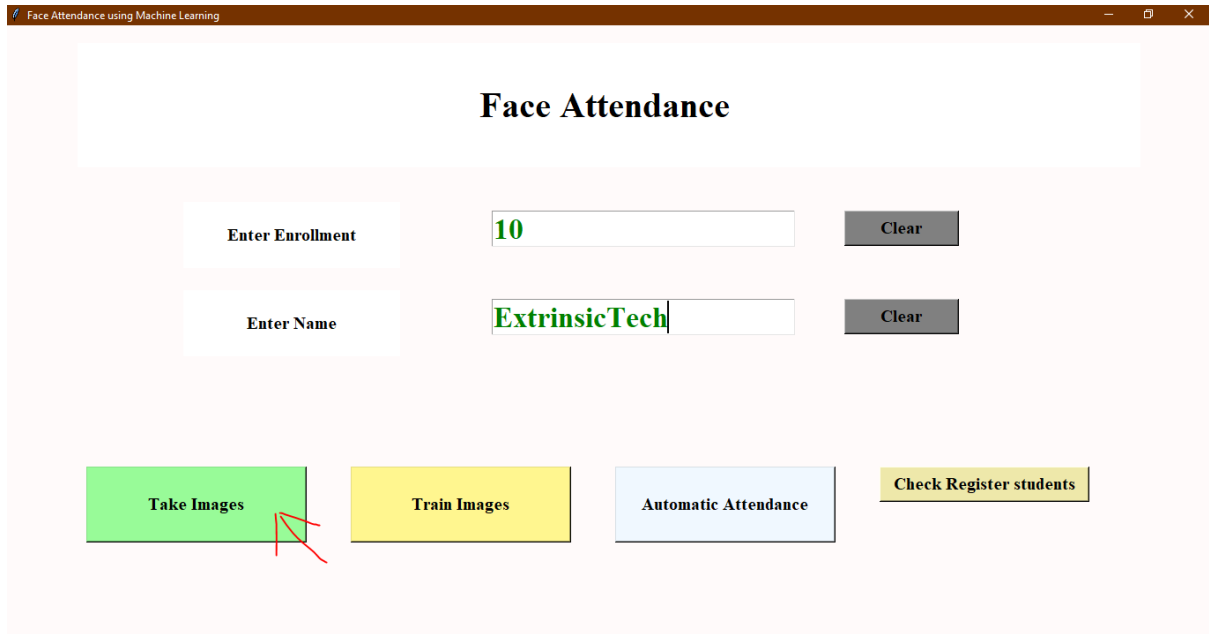
Camera will open but person cannot be identified/unknown.



As your face is not registered in Application, it will not mark you as present.

Step 6 : Add Student Face to database

1. Enter Roll Number and Name
2. Click on Take Images



The screenshot shows a web application titled "Face Attendance" with a brown header bar. Below the header, there are two input sections. The first section has a label "Enter Enrollment" and a text box containing the number "10", with a "Clear" button to its right. The second section has a label "Enter Name" and a text box containing "ExtrinsicTech", also with a "Clear" button to its right. Below these sections are four buttons: "Take Images" (green), "Train Images" (yellow), "Automatic Attendance" (light blue), and "Check Register students" (yellow). A red arrow points to the "Take Images" button.

You will see that camera will open and will multiple shots will be stored in [.\face_attendance\TrainingImage](#) path



After capturing your face images, it will be stored and on UI you will see this message

Face Attendance

Enter Enrollment

10

Clear

Enter Name

ExtrinsicTech

Clear

Images Saved for Enrollment : 10 Name : ExtrinsicTech

Take Images

Train Images

Automatic Attendance

Check Register students

Now Click on Train images so your face model will be ready.
After successful training of the model you will get below msg

Face Attendance

Enter Enrollment

10

Clear

Enter Name

ExtrinsicTech

Clear

Model Trained

Take Images

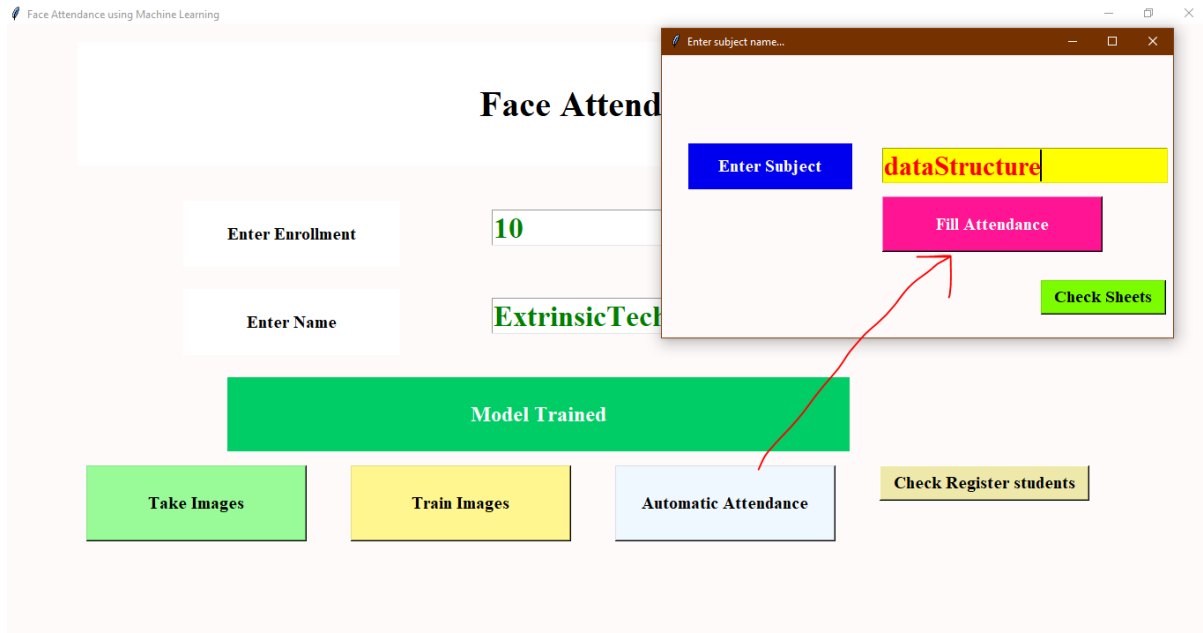
Train Images

Automatic Attendance

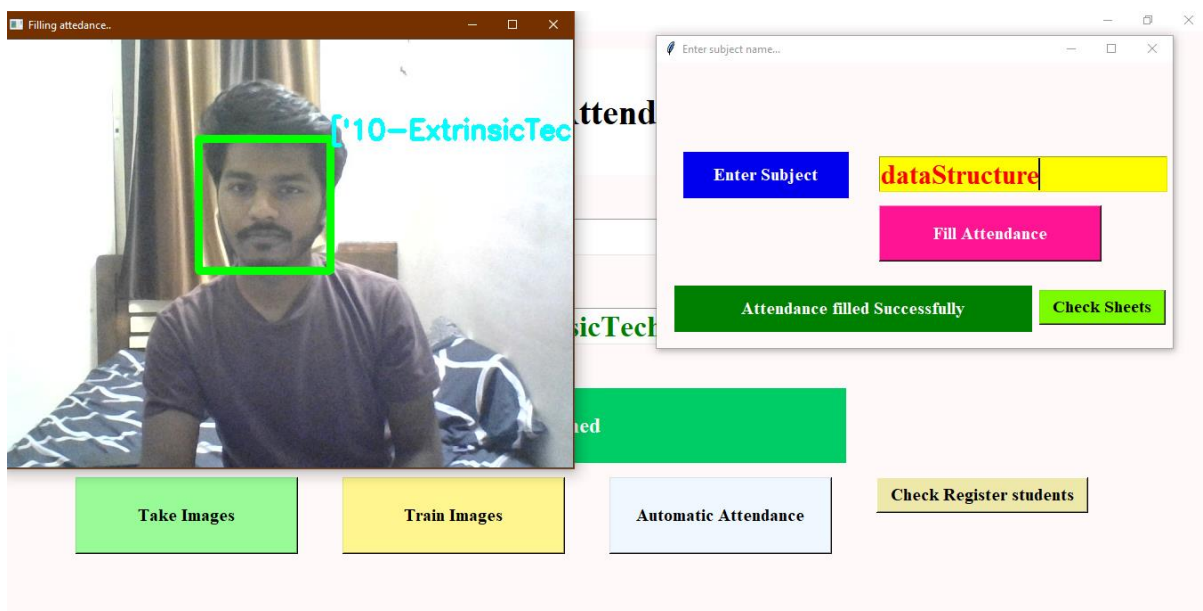
Check Register students

Step 7 : Real Time attendance

Click on Automatic Attendance, select subject and start.



Roll Number and Name will be displayed on Face



You can also see the all attendees after taking attendance on pop up screen

Enrollment	Name	Date	Time
10	ExtrinsicTec	2021-04-23	04:59:21

Face Attendance

Enter Enrollment

10

Enter Name

ExtrinsicTec

Model Trained

Take Images

Train Images

Automatic Attendance

Check Register students

Enter subject name...

Enter Subject

dataStructure

Fill Attendance

Attendance filled Successfully

Check Sheets

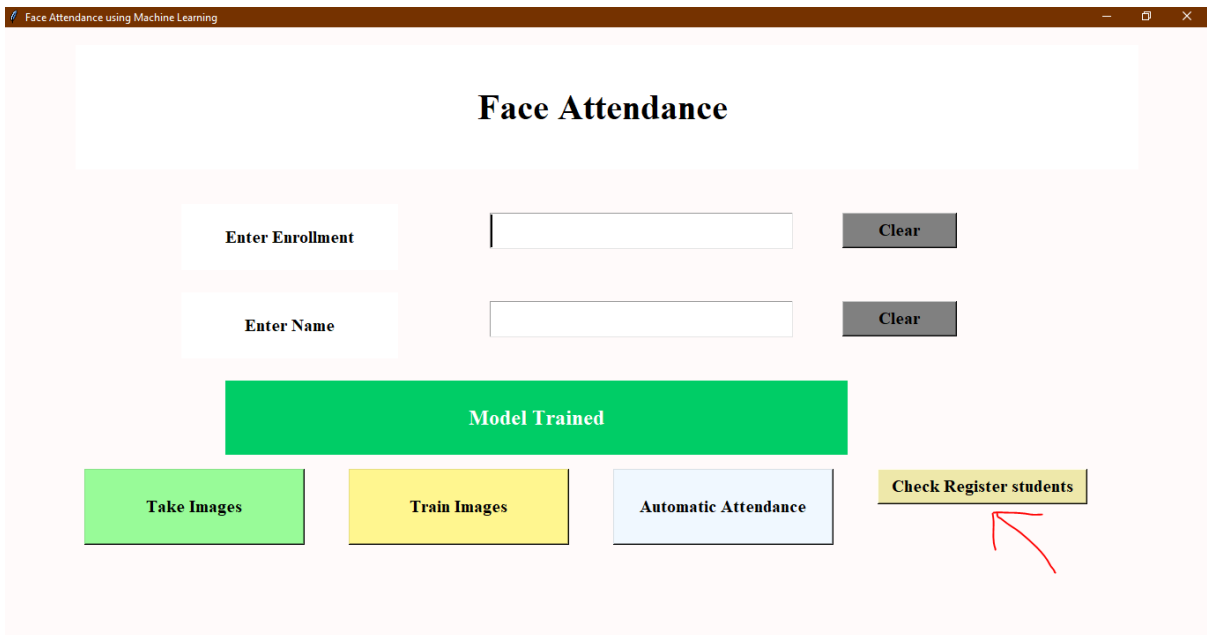
Excel sheet is also created

This PC > Downloads > face_attendance > Attendance

Name	Date modified
Manually Attendance	24-03-2020 10:15
dataStructure_2021-04-23_04-58-35	23-04-2021 04:58

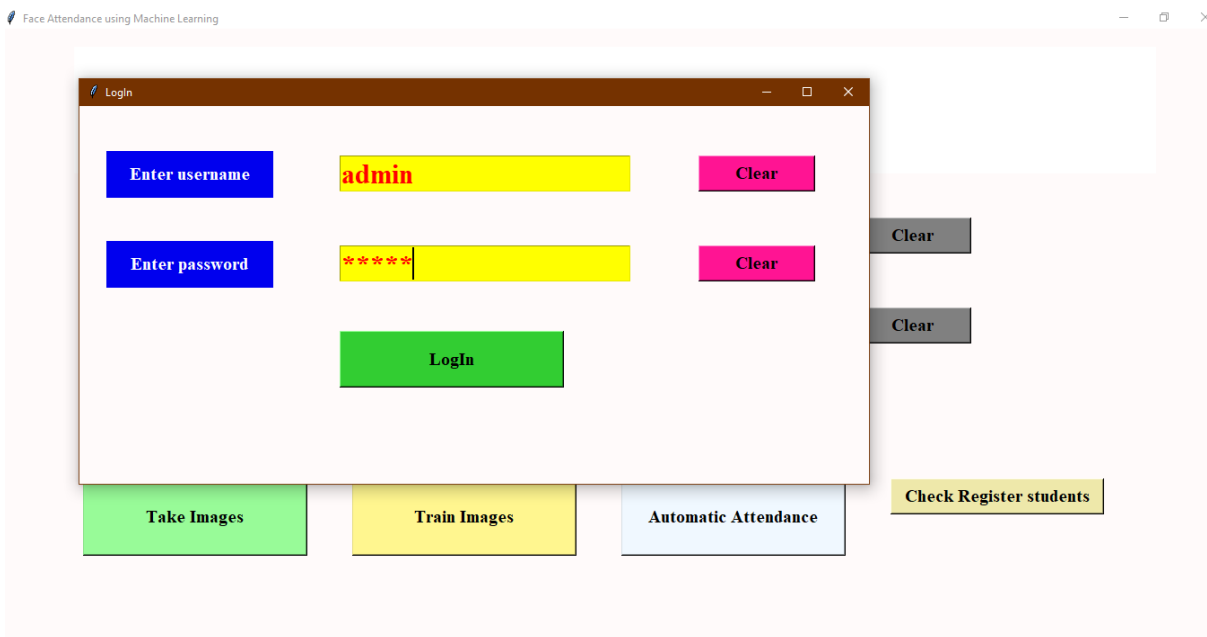
Enrollment				
A	B	C	D	E
1	Enrollment	Name	Date	Time
2	10	['ExtrinsicTech']	23-04-2021	04:58:21
3				

Step 8 : You can also check the details of registered student here



Username : admin

Password : admin



Student Details			
Enrollment	Name	Date	Time
10	ExtrinsicTec	2021-04-23	04:54:13



Thanks and Regards,
Extrinsic Technology

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