FACIAL RECOGNITION ATTENDANCE SYSTEM

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(USING PYTHON)

INTRODUCTION

- The Basic Idea Behind "**Facial Recognition Attendance System**" is to mark the attendance of students using their face identity.
- This project proposes a method to automate the attendance system in schools and colleges.
- The Facial Recognition Attendance System has gained a lot of interests over a past few years. This system is not only efficient but also more secure.
- This method offers more convenient, effective and efficient usage where high- end security comes into picture.

HARDWARE/SOFTWARE REQUIREMENTS

- Windows 11(8 GB RAM,64 Bit OS)
- Python3
- OpenCV
- Face Recognition
- NumPy
- PyCharm(IDLE)

USES

- Streamline attendance tracking for students and teachers, reducing paperwork and manual processes.
- It can be used to enhance campus security by tracking individuals entering and exiting the premises.
- Improve security in online banking and financial transactions by adding facial recognition to the authentication process.
- Ensure compliance with safety protocols by tracking mask usage and social distancing.

BASIC IDEA OF THE PROJECT

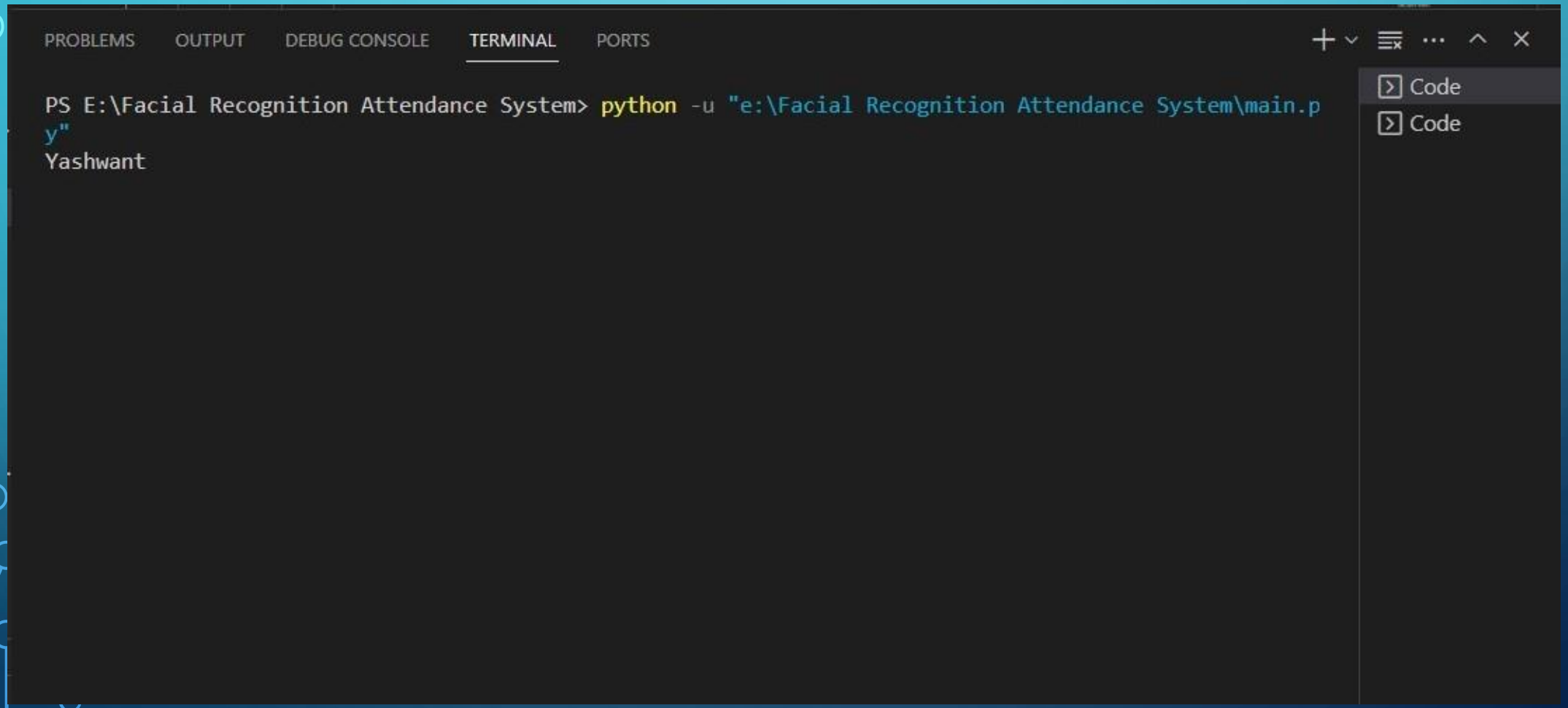
- A video is a collection of different frames played at different speed such as 60 fps. The Facial Recognition Attendance System continuously captures frames from the camera and processes them for face recognition. It compares the detected face encodings with the known face encodings to recognize attendees. If a recognized face is in the list of known attendees, it marks their attendance

WORKING:-

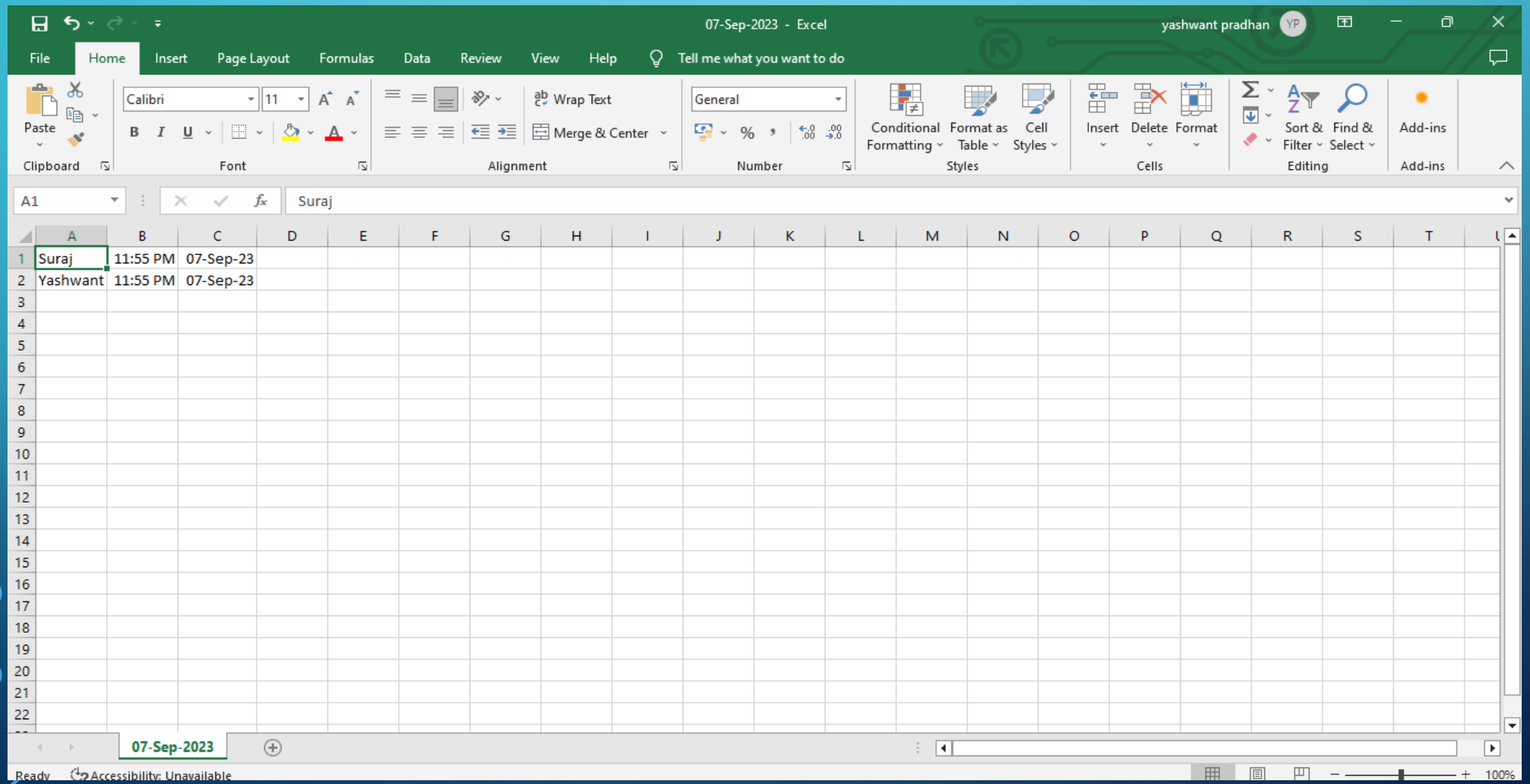
When we run the program, a video frame named “Attendance System "opens on the output screen:-

1) This output screen continuously captures frames from webcam, resizes them and processes them for face recognition.

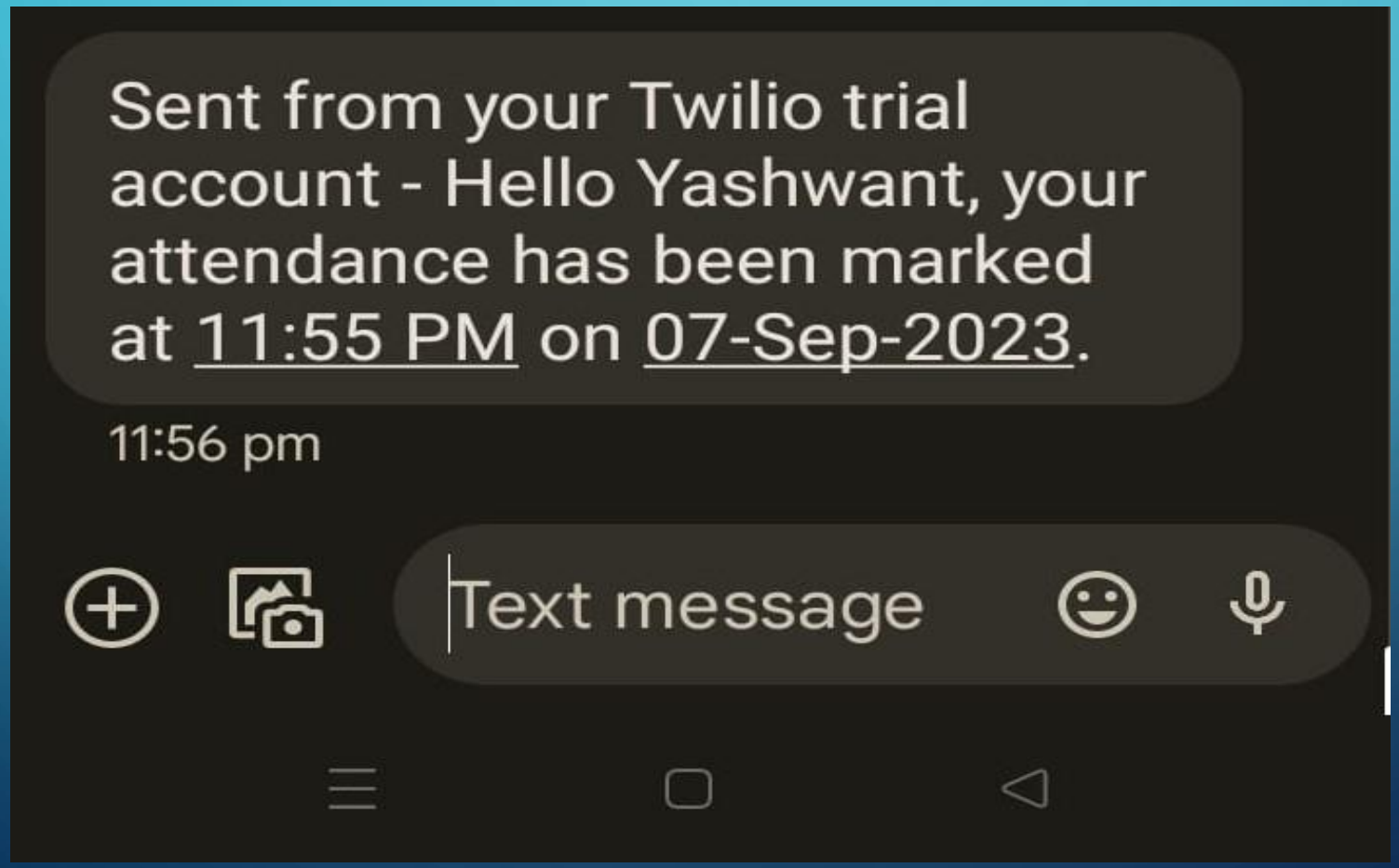
2) If a recognized face is in the list of known attendees, it shows their name so the attendee can be sure of his/her attendance.



3) Also, it marks their attendance in the CSV file with their name, current time, and date.



4) Then, it sends an SMS notification to the attendee on their verified mobile number that their attendance has been marked.



Future Enhancement

In future we will be improving the accuracy of the program so that it can differentiate between a real human and a human image.

A GUI can be designed to make it more user-friendly.

…Thank You…