FACE RECOGNITION ATTENDANCE SYSTEM

DEVELOPED BY

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OBJECTIVE

- The purpose of this project is to build a human face recognition to mark the attendance.

INTRODUCTION

- Recognition of the human face is an active issue for authentication purposes specifically in the context of attendance of students.
- Attendance system using face recognition is a procedure of recognizing students by using face biostatistics based on the high definition camera and other computer technologies.

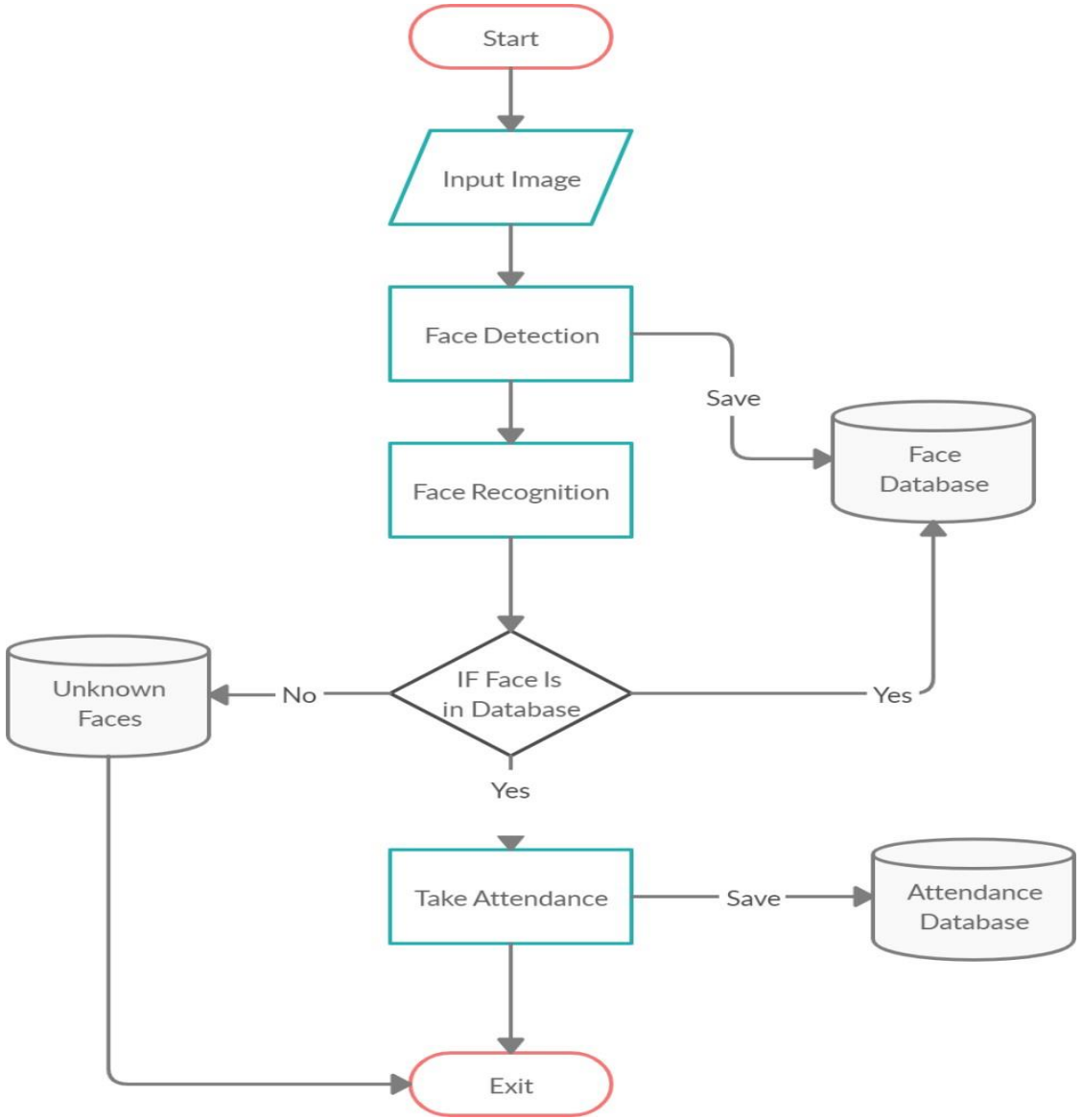
EXISTING SYSTEMS

- Fingerprint Based recognition system and its Disadvantages are Time-consuming.
- RFID(Radio Frequency Identification) Based recognition system and its Disadvantages are Fraudulent usage.
- Iris Based Recognition System and its Disadvantages are Privacy invasion.

PROPOSED SYSTEM

- This system captures students' faces and stores them in a database for attendance purposes.
- The system detects all facial features, including seating position and posture, to accurately identify students.
- With video processing, the system automatically recognizes faces and updates the attendance database.
- Eliminating the need for manual attendance taking by teachers.

DATA FLOW DIAGRAM



REQUIREMENTS

SOFTWARE REQUIREMENTS :

- Python (3.6 or higher)
- Windows 10 or advanced version
- Pycharm or VScode

REQUIREMENTS

HARDWARE REQUIREMENTS :

- IP Camera / Web Camera
- Computer with dual core processor
- Min 4GB RAM
- Min 1GB ROM

PROJECT DESCRIPTION

- A facial recognition attendance system uses facial recognition technology to identify and verify a person using the person's facial features and automatically mark attendance.
- The software can be used for different groups of people such as employees, students, etc.
- Eliminate paperwork and save time.
- The system records and stores the data in real-time.

MODULES

- Check Camera
- Capture Faces
- Train Images
- Recognize & Attendance
- Auto Mail
- Quit

Module Description

Check Camera :

- This module is responsible for checking the availability of the camera and ensuring that it is working properly.
- If the camera is not available or not functioning correctly, the system cannot capture images and recognize faces.

Module Description

Capture Faces :

- In this module, the camera captures the images of the individuals and extracts the faces from the images.
- This module is responsible for capturing high-quality images that can be used for face recognition.

Module Description

Train Images :

- Once the images have been captured, this module trains the system to recognize the faces.
- This module uses machine learning algorithms to create a face recognition model that can accurately identify individuals based on their facial features.

Module Description

Recognize & Attendance :

- This is the core module of the system, responsible for recognizing the faces of the individuals and marking their attendance.
- The system compares the captured face with the trained model and determines the identity of the individual.
- It then marks the attendance and updates the attendance record in the database.

Module Description

Auto Mail :

- This module automatically sends an email to the concerned person(s) with the attendance report.
- This module eliminates the need for manual intervention, making the system more efficient.

Module Description

Quit :

- This module allows the user to exit the system and terminate the program.
- It allow convenient and controlled way to exit the application while ensuring data integrity and system stability.

CONCULSION

- This system overcome many limitations incorporated in attendance, this system saves a great amount of time and reduces errors which may occur during attendance calculation.
- The system I have developed is fully responsive which can be used in mobile, tablets and different operating systems.

Screenshots

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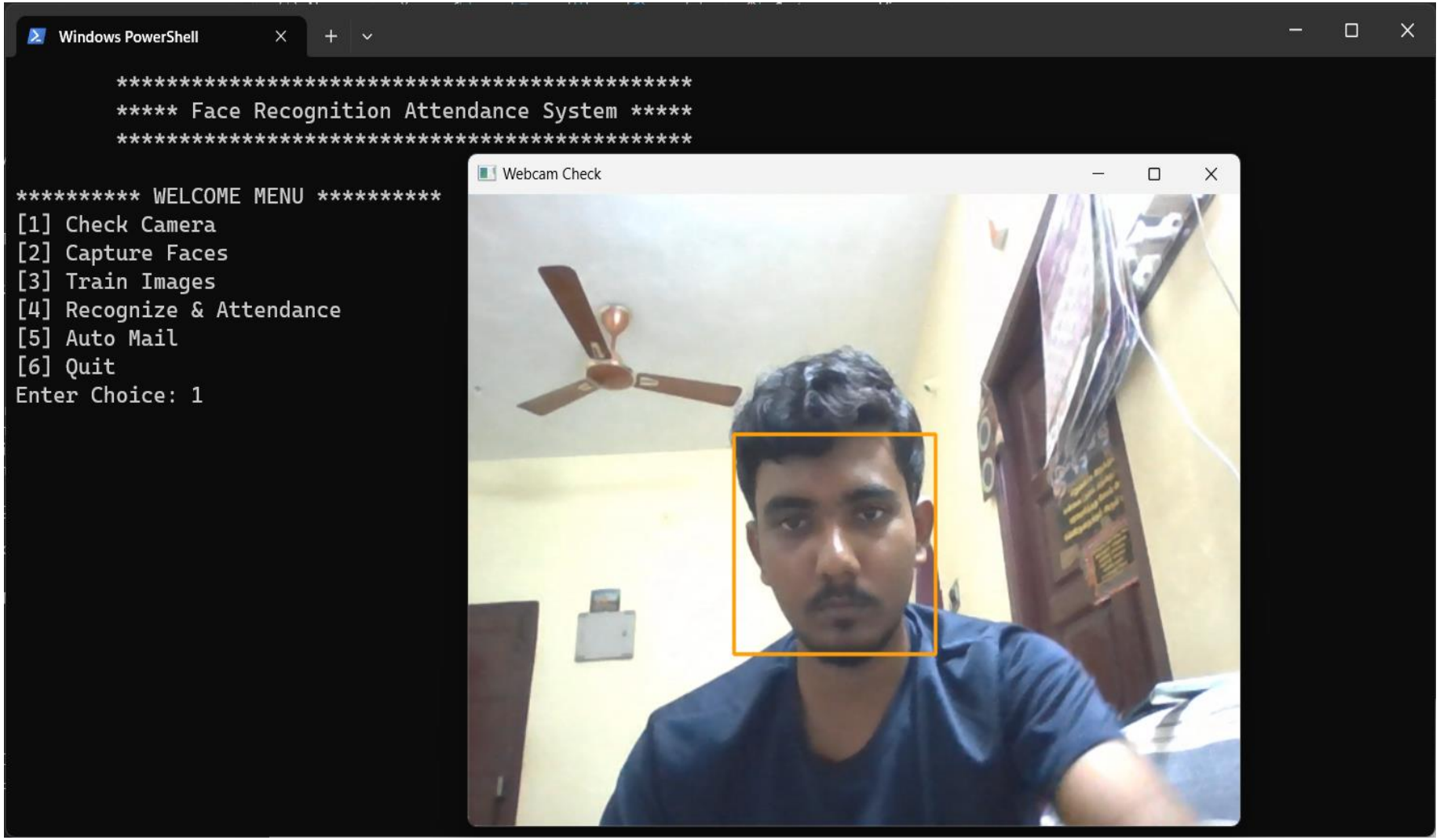
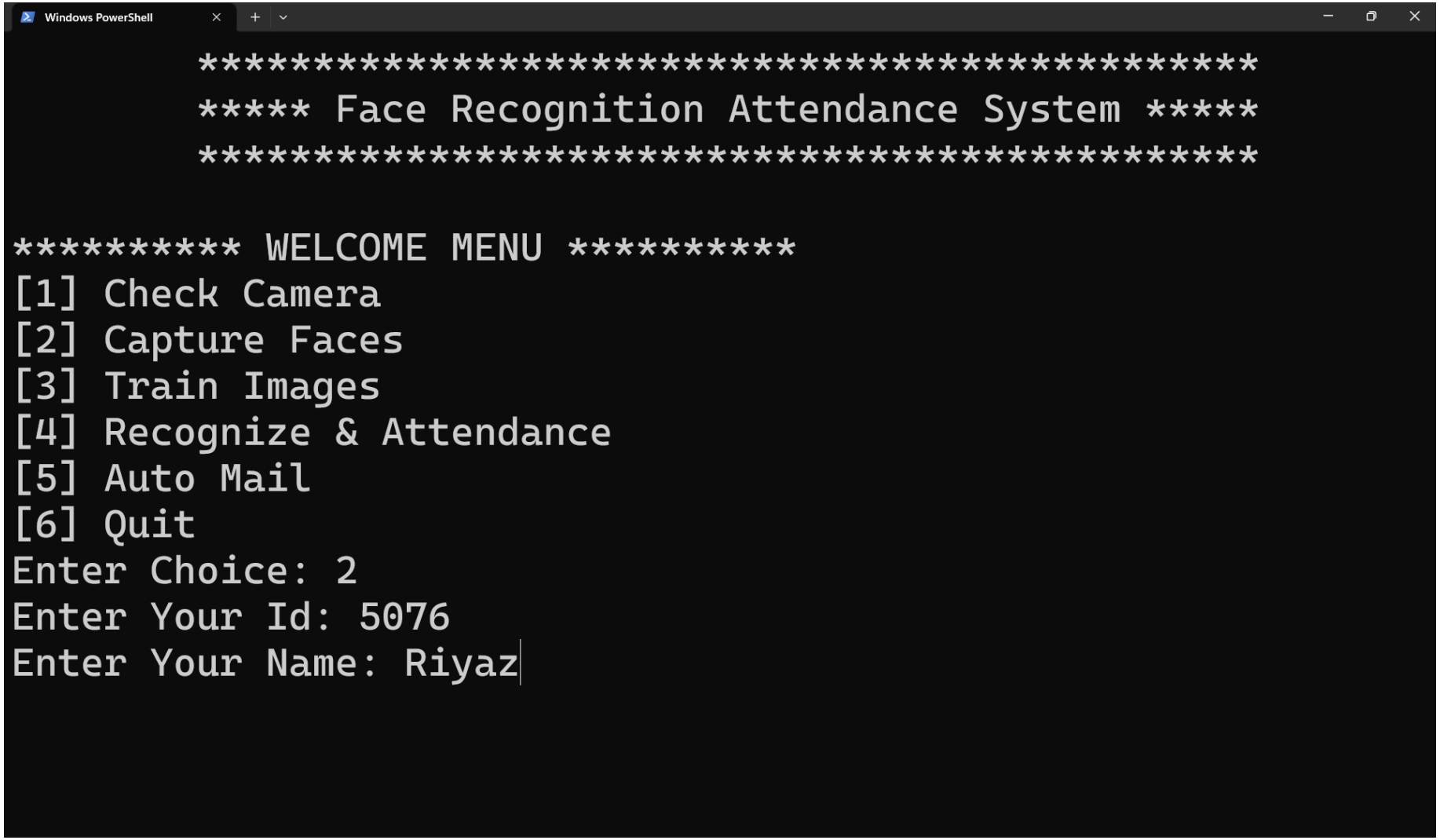


Screenshots



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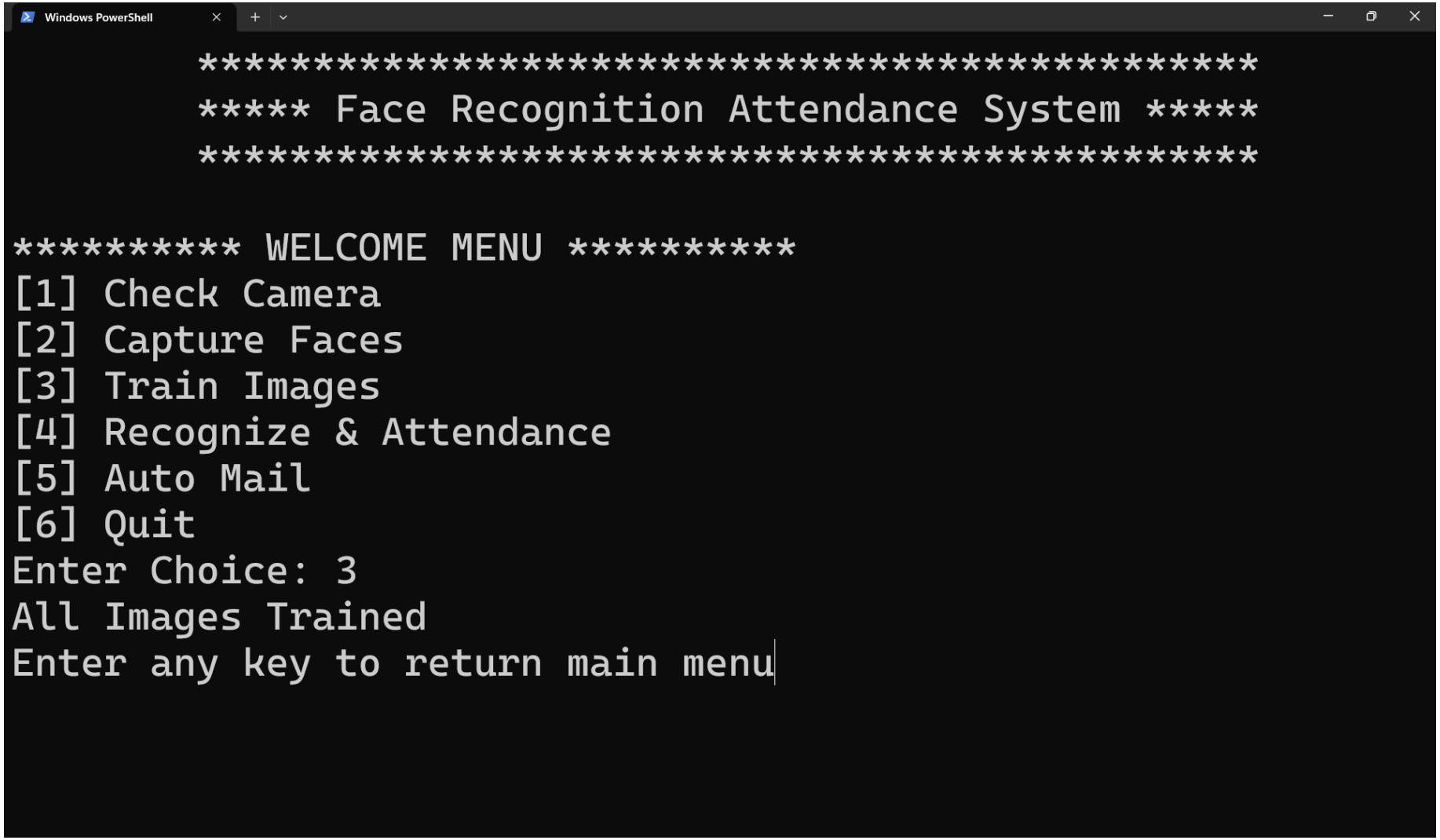

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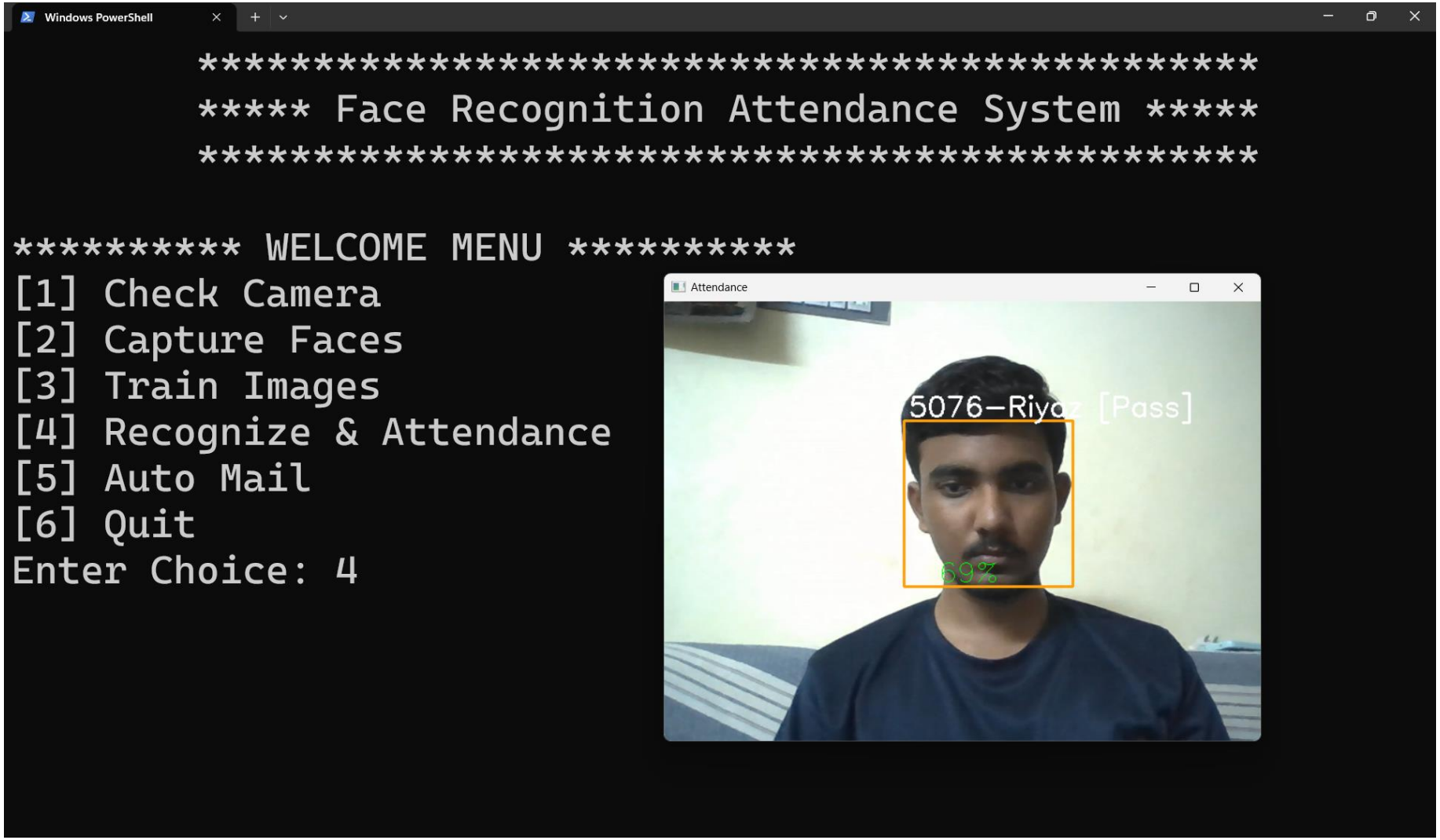

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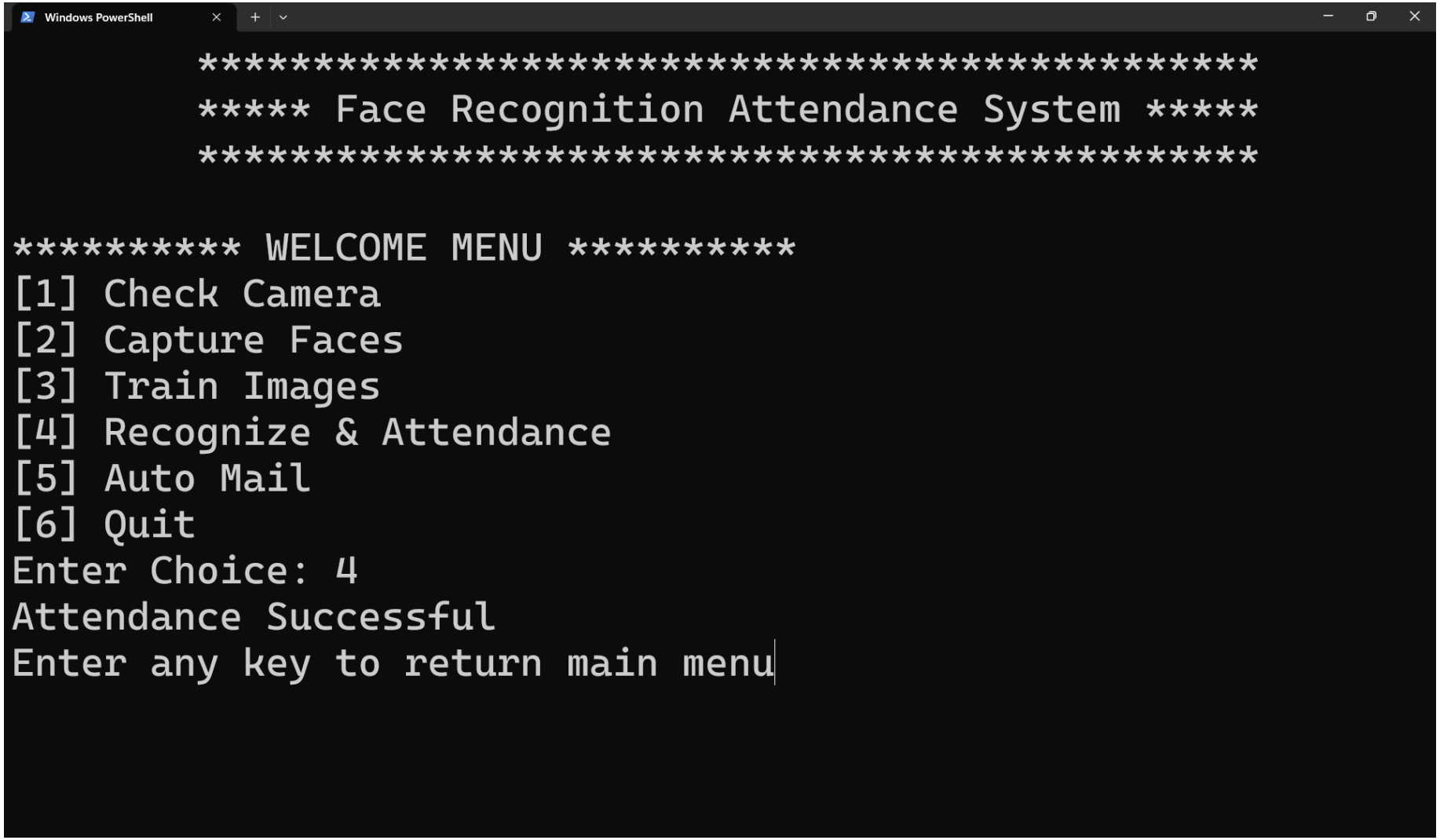

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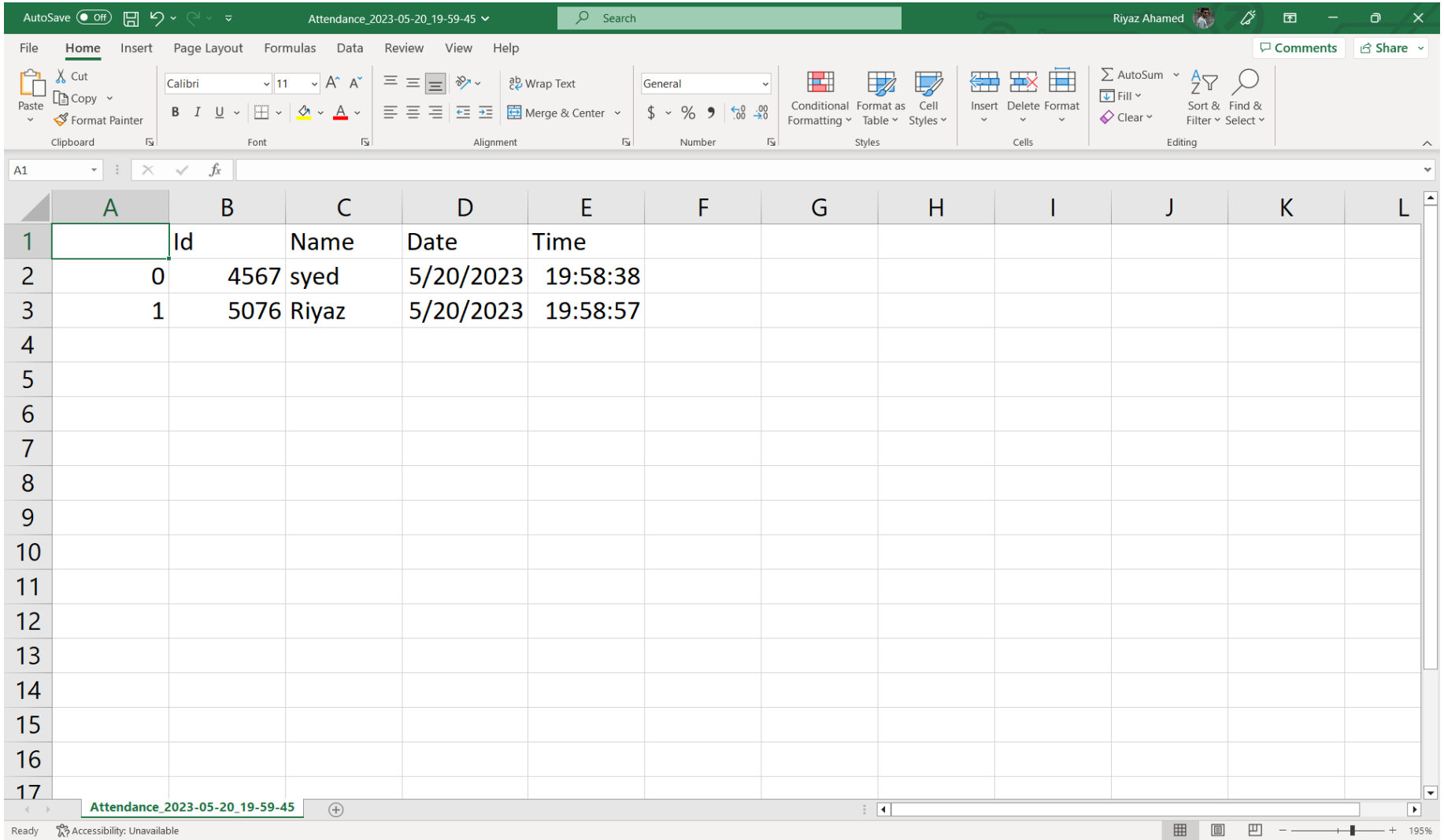

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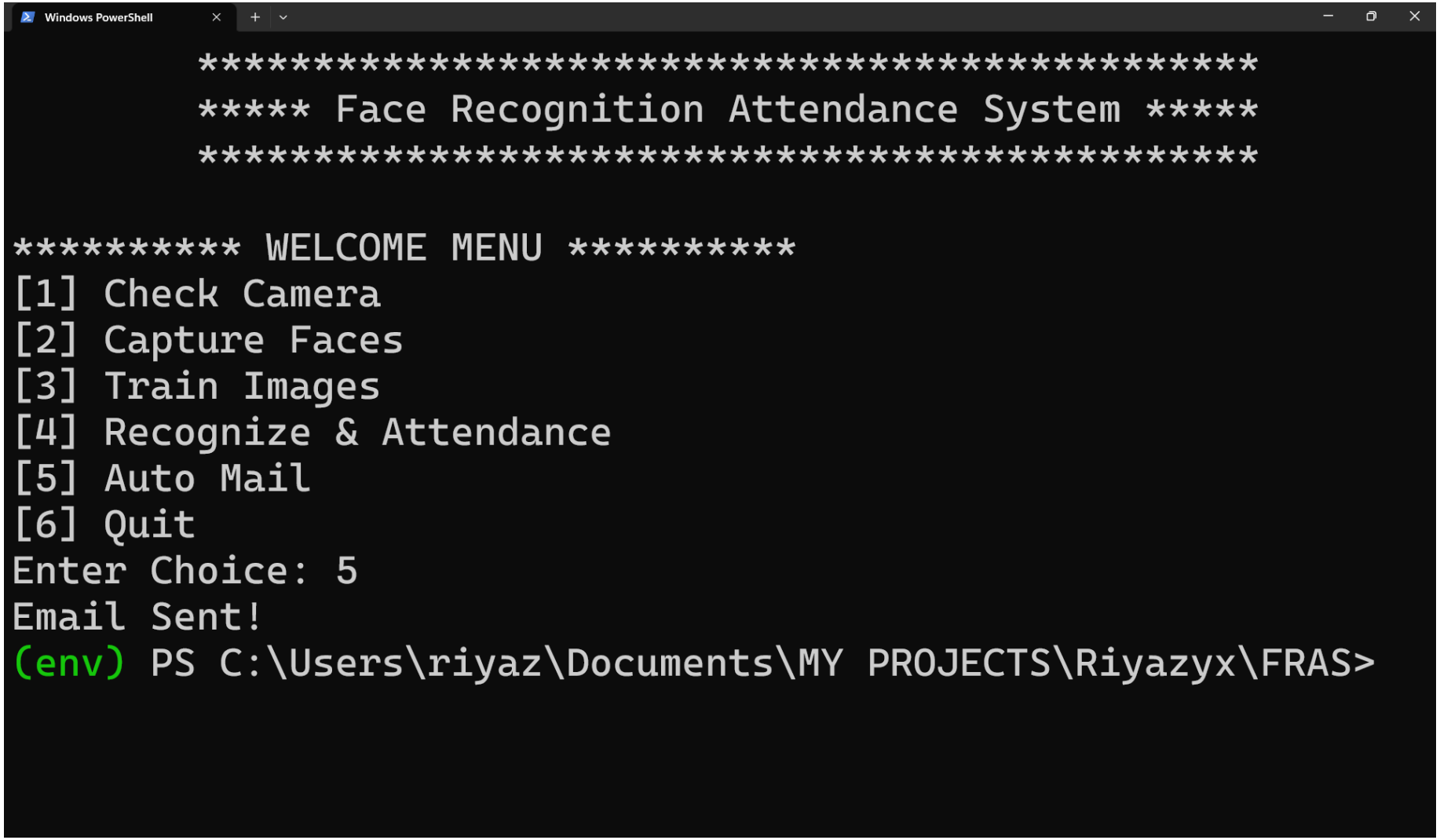
Screenshots



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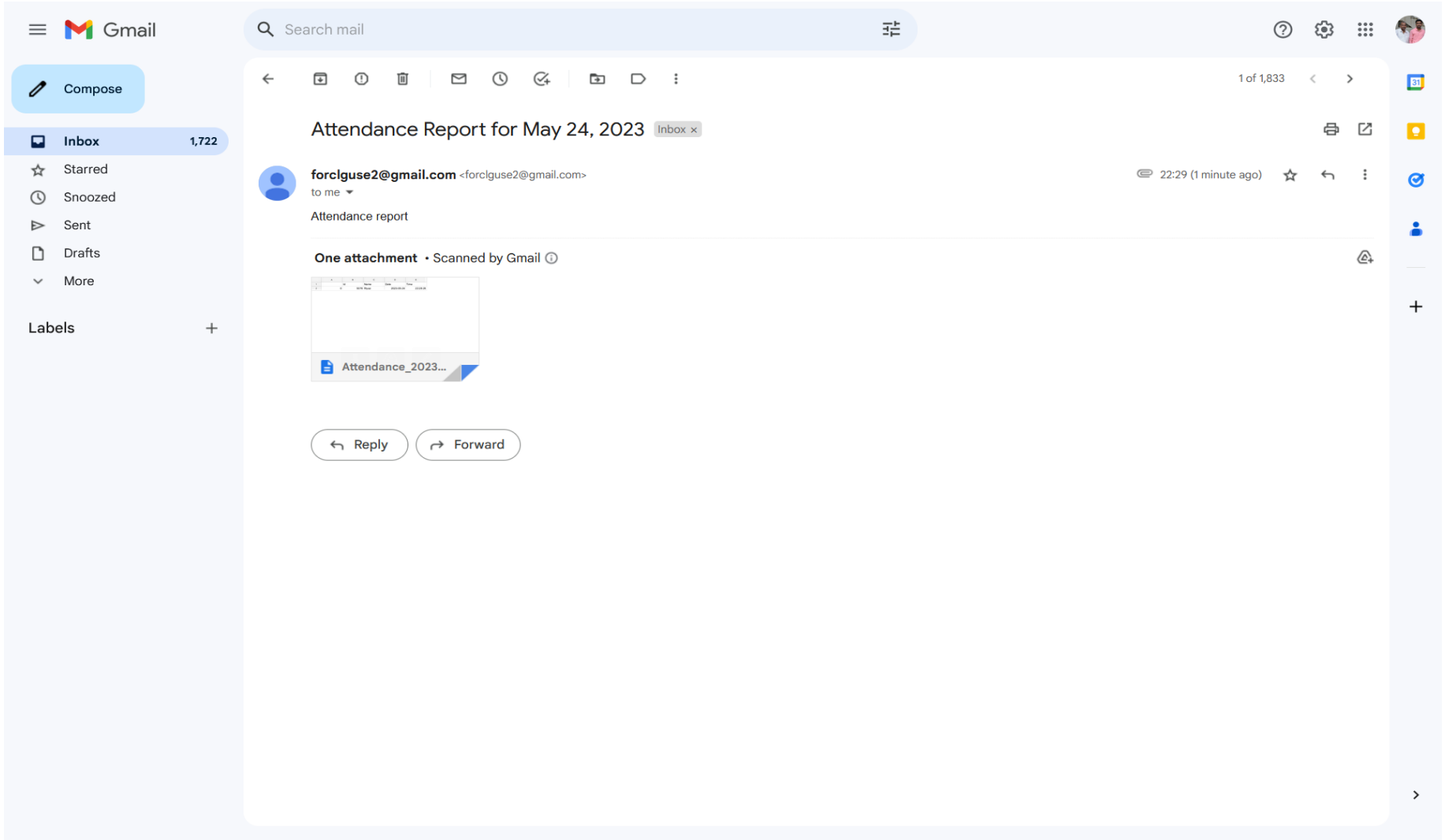

THANK YOU