Attendance Management system

in this line of code there is a two feauture gather detail or insert detail where gather details is stands for previous person detail that come and makes attendance or for recheck to that have attendence is completed or not where insert dtails stands for new person who joins company and he wants to make attendece then he choose insert details and fill whole thing and makes here attendence completely in the next time i updated this code and insert a new feature by changing it security or secure services.

In [7]:
```
import csv

class Person:
    def __init__(self, id, name, age, biometrics=None):
        self.id = id
        self.name = name
        self.age = age
        self.biometrics = biometrics

class AttendanceSystem:
    def __init__(self):
        self.people = []
        self.load_data()

    def load_data(self):
        try:
            with open('people.csv', 'r') as file:
                reader = csv.reader(file)
                for row in reader:
                    id, name, age, biometrics = row
                    self.people.append(Person(id, name, age, biometrics))
        except FileNotFoundError:
            pass

    def save_data(self):
        with open('people.csv', 'w', newline='') as file:
            writer = csv.writer(file)
            for person in self.people:
                writer.writerow([person.id, person.name, person.age, person.biometrics])

    def gather_details(self):
        print("Gathering details:")
        for person in self.people:
            print(f"ID: {person.id}, Name: {person.name}, Age: {person.age}")

    def insert_details(self):
        id = input("Enter ID: ")
        name = input("Enter Name: ")
        age = input("Enter Age: ")
        biometrics = input("Enter Biometrics: ")

        self.people.append(Person(id, name, age, biometrics))
        self.save_data()
        print("Details inserted successfully.")

    def make_attendance(self):
        print("Choose attendance mode:")
        print("1. Login")
        print("2. Facial Recognition")
        choice = input("Enter choice: ")

        if choice == '1':
```

```
            id = input("Enter ID for attendance: ")
            person = next((p for p in self.people if p.id == id), None)
            if person:
                print(f"Attendance marked for {person.name}.")
            else:
                print("Person not found.")
        elif choice == '2':
            # Simulating facial recognition
            print("Facial recognition not implemented.")
        else:
            print("Invalid choice.")

    def run(self):
        print("Welcome to my organization. I hope you're well.")
        print("Options:")
        print("1. Gather Details")
        print("2. Insert Details")
        choice = input("Enter choice: ")

        if choice == '1':
            self.gather_details()
        elif choice == '2':
            self.insert_details()
        else:
            print("Invalid choice.")

if __name__ == "__main__":
    system = AttendanceSystem()
    system.run()
```

```
Welcome to my organization. I hope you're well.
Options:
1. Gather Details
2. Insert Details
Enter choice:
Invalid choice.
```

In this code its nothing just an updation of new changes like proof of attendence such that other peoples cannot make attendence for avoiding this i add a feature like make attendence here a person insert details and then a message slash that now you are all set and goo for make attendence then he choose 3 option make attendence here automatically camera opens and click the real time person 's pic and then he asks for details that he perviously inserted if it matchs it store data into gather details other wise and error encounter that wrong details inserted please make sure it's you other wise action will be taken against you.

In [ ]:

```
import csv
import cv2

class Person:
    def __init__(self, id, name, age, biometrics=None, username=None, password=None, dob=No
        self.id = id
        self.name = name
        self.age = age
        self.biometrics = biometrics
        self.username = username
        self.password = password
        self.dob = dob
        self.roll = roll
        self.branch = branch

class AttendanceSystem:
    def __init__(self):
        self.people = []
        self.load_data()
```

```
    def load_data(self):
        try:
            with open('people.csv', 'r') as file:
                reader = csv.reader(file)
                for row in reader:
                    id, name, age, biometrics, username, password, *extra_fields = row
                    dob = roll = branch = None
                    if len(extra_fields) >= 3:
                        dob, roll, branch = extra_fields[:3]
                    self.people.append(Person(id, name, age, biometrics, username, passwor
        except FileNotFoundError:
            pass

    def save_data(self):
        with open('people.csv', 'w', newline='') as file:
            writer = csv.writer(file)
            for person in self.people:
                writer.writerow([person.id, person.name, person.age, person.biometrics, pe
                                 person.dob, person.roll, person.branch])

    def gather_details(self):
        print("Gathering details:")
        for person in self.people:
            print(f"ID: {person.id}, Name: {person.name}, Age: {person.age}")

    def insert_details(self):
        id = input("Enter ID: ")
        name = input("Enter Name: ")
        age = input("Enter Age: ")
        biometrics = input("Enter Biometrics: ")
        username = input("Enter Username: ")
        password = input("Enter Password: ")

        self.people.append(Person(id, name, age, biometrics, username, password))
        self.save_data()
        print("Details inserted successfully.")

    def login(self):
        username = input("Enter Username: ")
        password = input("Enter Password: ")

        person = next((p for p in self.people if p.username == username and p.password == p
        if person:
            return person
        else:
            print("Login failed.")
            return None

    def make_attendance(self, person):
        print("Make sure it's you.")

        # Open camera for image capture
        camera = cv2.VideoCapture(0)
        ret, frame = camera.read()
        cv2.imwrite('capture.jpg', frame)
        camera.release()

        print("Please provide additional details:")
        name = input("Name: ")
        dob = input("Date of Birth (DOB): ")
        roll = input("Roll: ")
        branch = input("Branch: ")

        person.name = name
        person.dob = dob
        person.roll = roll
        person.branch = branch
```

```
        print(f"Attendance marked for {person.name}. Details updated.")
        self.save_data()

    def run(self):
        print("Welcome to my organization. I hope you're well.")
        print("Options:")
        print("1. Gather Details")
        print("2. Insert Details")
        print("3. Make Attendance")
        choice = input("Enter choice: ")

        if choice == '1':
            self.gather_details()
        elif choice == '2':
            self.insert_details()
        elif choice == '3':
            person = self.login()
            if person:
                self.make_attendance(person)
        else:
            print("Invalid choice.")

if __name__ == "__main__":
    system = AttendanceSystem()
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