Face Recognition Attendance System Class Diagram

The **face recognition attendance system class diagram** is an illustration of the Unified Modeling Language's (UML) class relationships and source code dependencies. Its class describes the methods and variables of an object, which is a specific thing in a program or a piece of code that represents that object.

What is a Face Recognition Attendance System?

Facial recognition is software that thoroughly maps a person's facial attributes and stores them in the database to be used as a reference whenever they need the recognition. To validate an individual's identification, the software compares a live capture or digital image to a piece of saved facial information using deep learning techniques.

The method of recognizing or verifying a person's facial features is known as facial recognition. It uses a person's facial characteristics to capture, analyze, and compare patterns. Face detection is required in order to detect and locate human faces in photos and videos. This detection has several advantages, including improved security, ease of integration, and automatic identification.

Facial recognition systems are used to track or identify people with criminal records who are wanted. When a database matches a person's face, the developed algorithms make it easy to track down criminals. If the technology detects a facial match, the authorized personnel were notified.

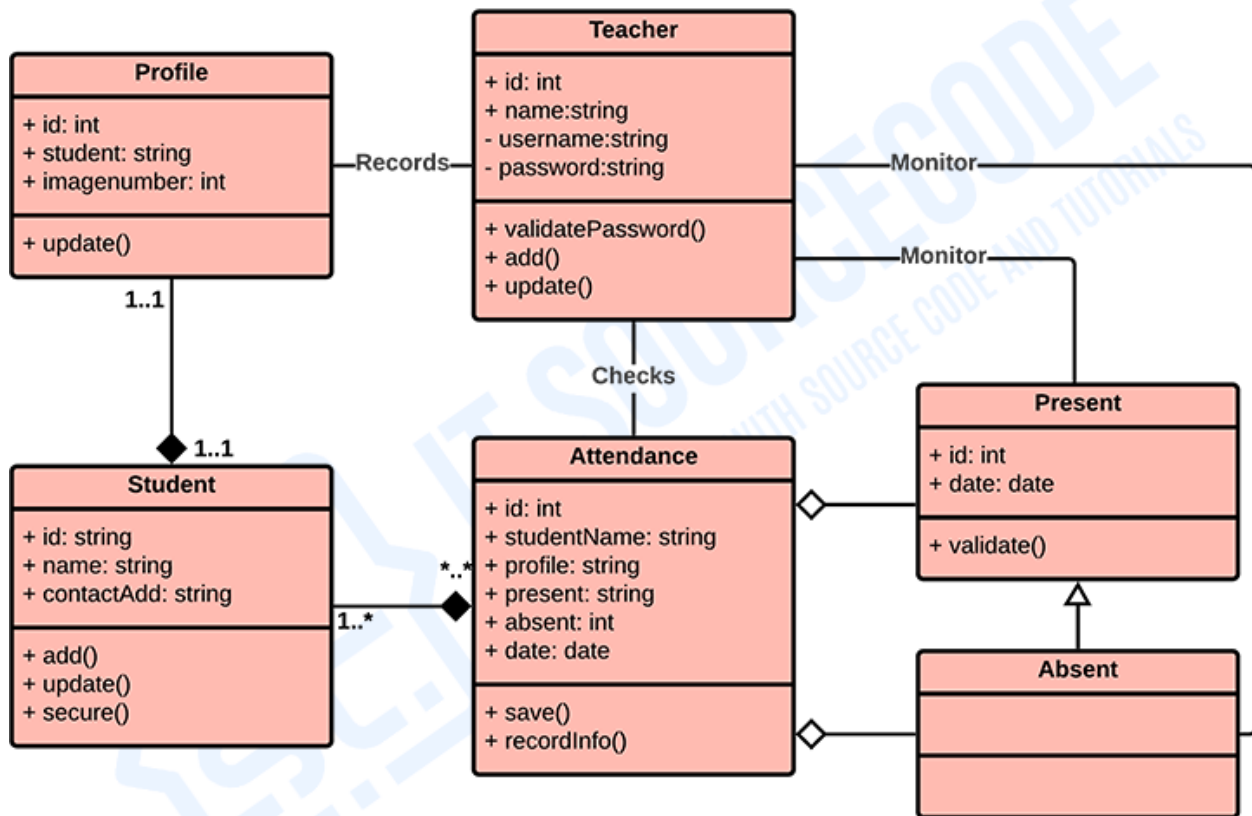## UML Class Diagram for Face Recognition Attendance System

The UML class diagram is similar to a flowchart in which classes are represented by boxes with three rows inside. The top rectangle holds the class's name; the middle rectangle contains the class's properties, and the bottom row contains the class's operation (methods).

The class diagram is one of the most useful forms of UML diagrams because it clearly elaborates the face recognition system's structure by representing its classes, characteristics, processes, and object relationships.

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The illustration of a class diagram informs the project proponents on what are the characteristic (structure) of the software by showing the classes that will be included in the project. It resembles a chart in which classes are represented as boxes with three rectangles inside each box. The top rectangle has the class's name; the middle rectangle contains the class's properties; and the bottom rectangle contains the class's methods, commonly known as operations.

FACE RECOGNITION ATTENDANCE SYSTEM

Profile

+ id: int
+ student: string
+ imagenumber: int

+ update()

Teacher

+ id: int
+ name:string
- username:string
- password:string

+ validatePassword()
+ add()
+ update()

Records

Monitor

1..1

1..1

Checks

Monitor

Student

+ id: string
+ name: string
+ contactAdd: string

+ add()
+ update()
+ secure()

Attendance

+ id: int
+ studentName: string
+ profile: string
+ present: string
+ absent: int
+ date: date

+ save()
+ recordInfo()

..

1..*

Present

+ id: int
+ date: date

+ validate()

Absent

CLASS DIAGRAM

Face Recognition Attendance System UML Class Diagram

UML Class Diagram for Face Recognition Attendance System (Explanation)

As you can see through the illustration, the classes were determined which is symbolized by boxes. They were designated with their corresponding attributes and shows the class' methods. Their relationships are also plotted to show the connections between classes and their multiplicity.

You should also look into the visibility symbols displayed in the diagram. These are important because it declares the status of attributes in your Class Diagram. Some of the Class' attributes are for public (+) which means that they can be accessed by the classes connected to them. While the protected (#) symbols, means that the attributes of the data can be accessed by the same classes or subclass and the (-) symbol means it cannot be accessed by other class.

Just bear in mind that when you create your class diagram, you have to be specific. Because it will affect your project development. Do not worry because you can use the sample given as your project reference or you may also create your own.