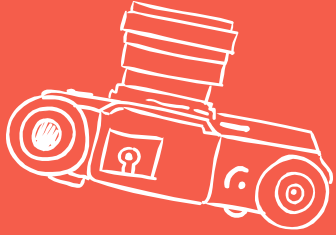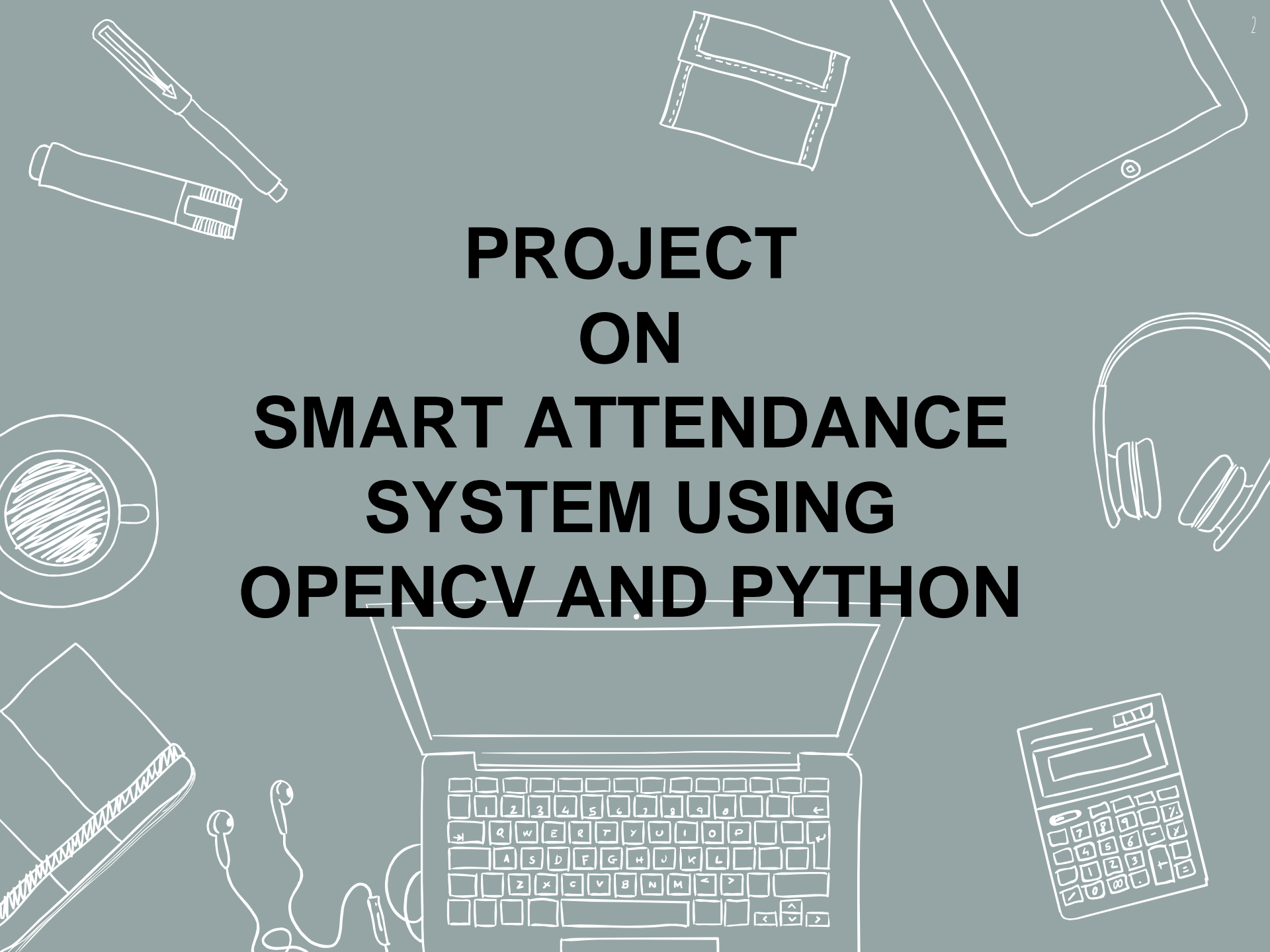# WELCOME

PROJECT ON SMART ATTENDANCE SYSTEM USING OPENCV AND PYTHON

SUBMITTED TO:
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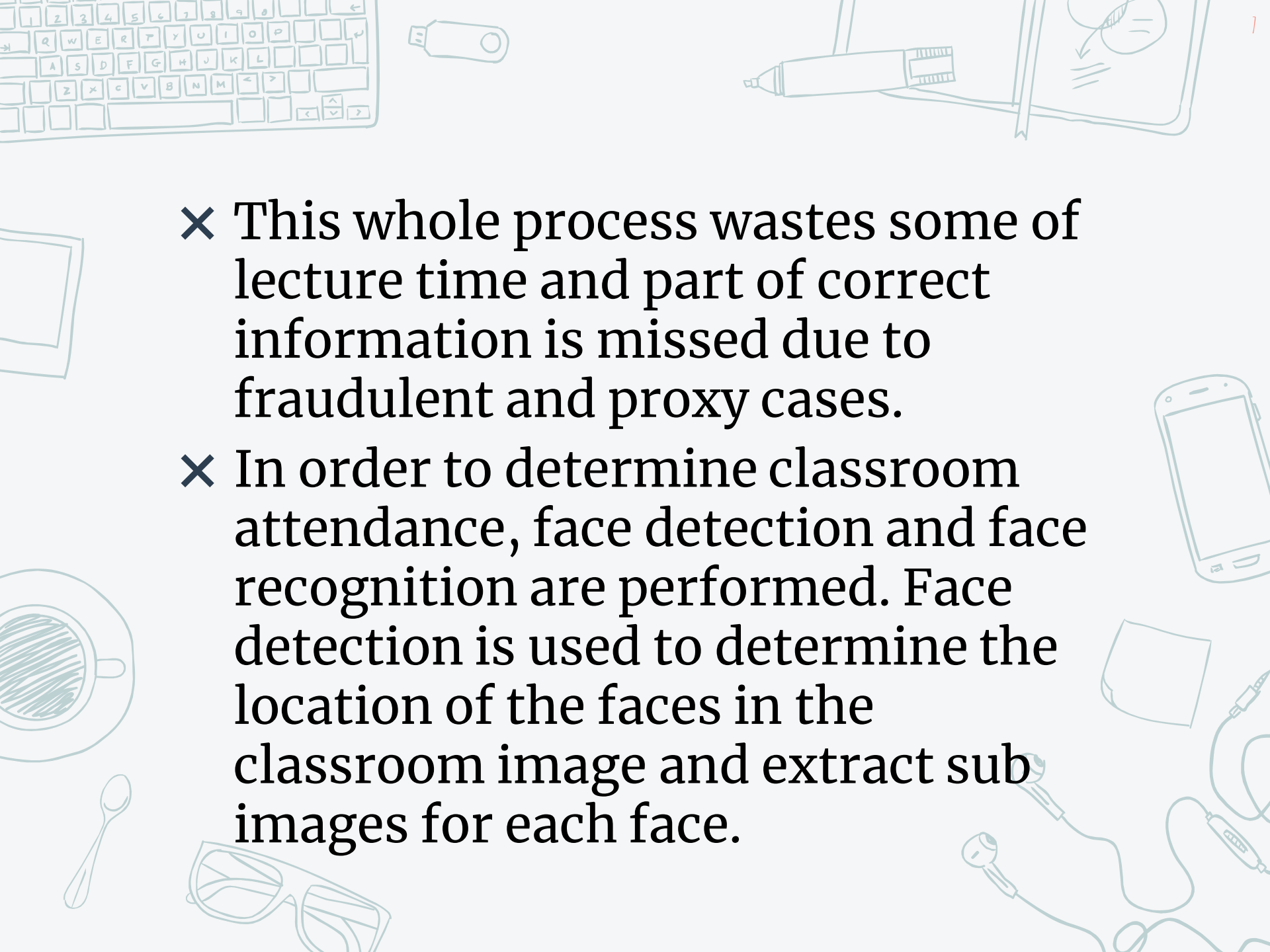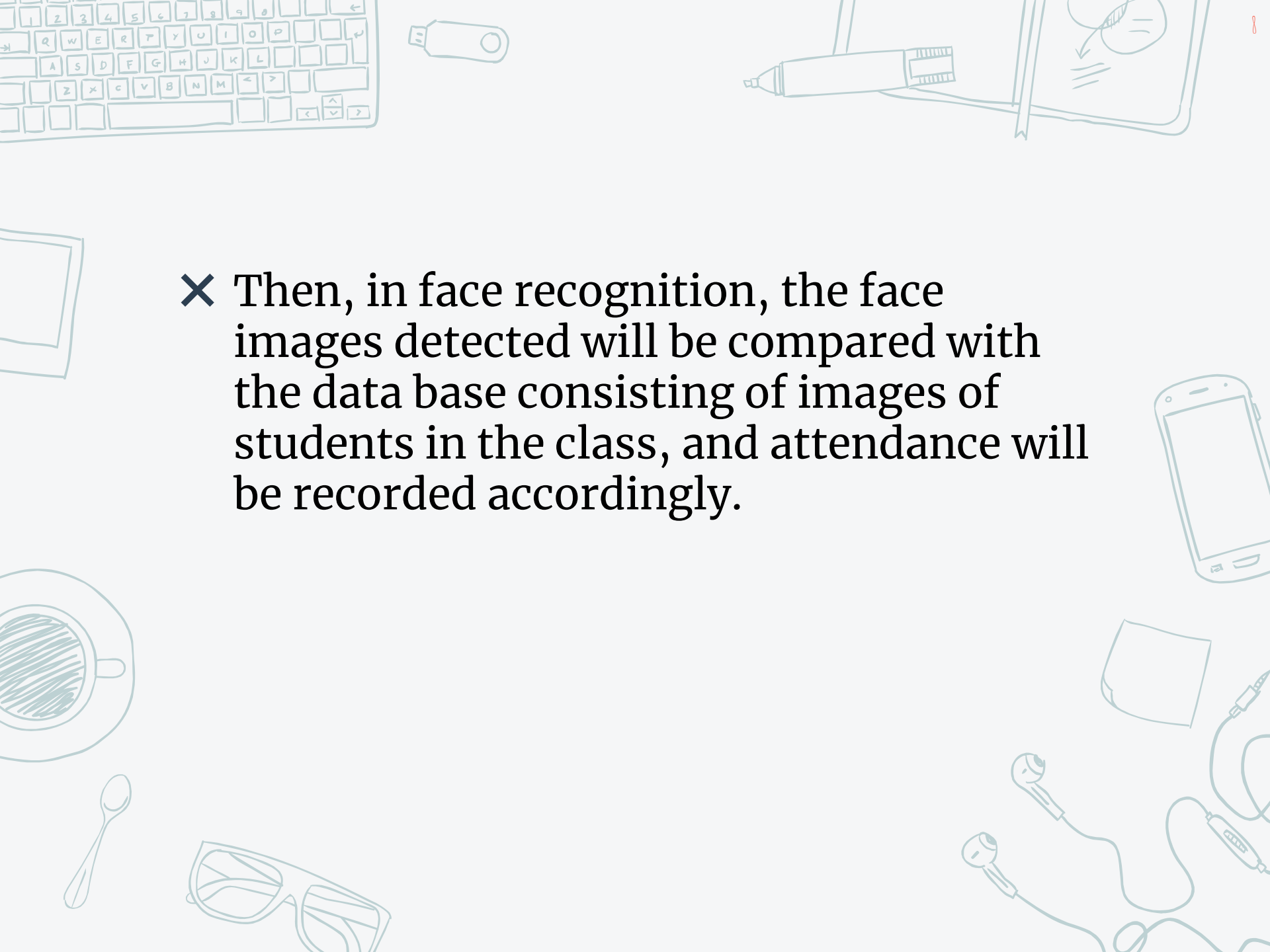| Name	ID Number
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OUTLINE :

1. Introduction
2. Problem Statement
3. Objective
4. Proposed Solution
5. Result
6. Conclution
7. Future Work

Introduction

Traditionally attendance is marked manually by teachers and they must make sure correct attendance is marked for respective student.

✕ This whole process wastes some of lecture time and part of correct information is missed due to fraudulent and proxy cases.

✕ In order to determine classroom attendance, face detection and face recognition are performed. Face detection is used to determine the location of the faces in the classroom image and extract sub images for each face.
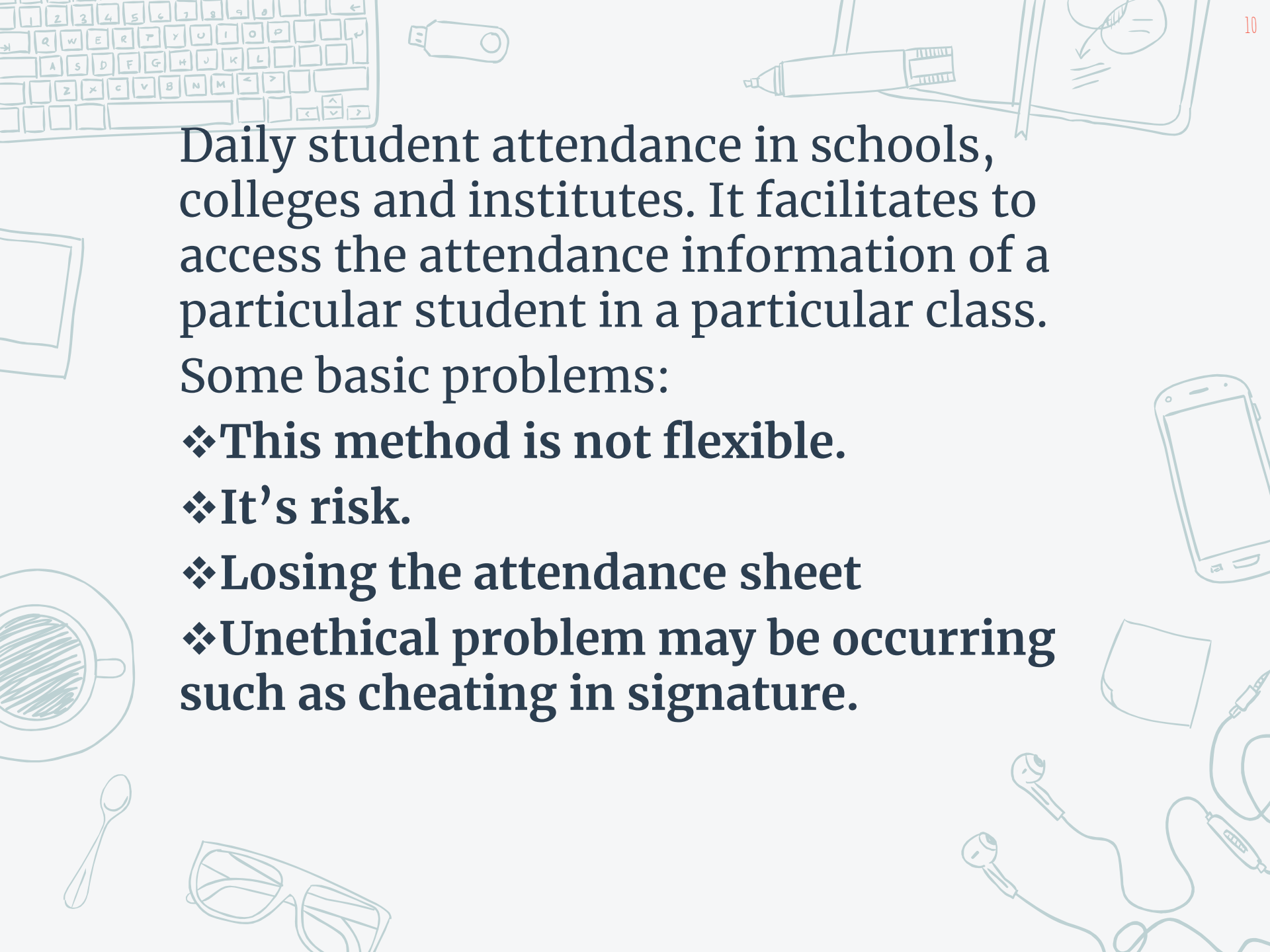
✕ Then, in face recognition, the face images detected will be compared with the data base consisting of images of students in the class, and attendance will be recorded accordingly.

Problem STATEMMAN

The various techniques for marking attendance are:

❖Signature based System

❖Fingerprint based System

❖Iris Recognition

❖RFID based System

❖Face Recognition

Daily student attendance in schools, colleges and institutes. It facilitates to access the attendance information of a particular student in a particular class.

Some basic problems:

❖**This method is not flexible.**

❖**It's risk.**

❖**Losing the attendance sheet**

❖**Unethical problem may be occurring such as cheating in signature.**

For example, a student does not attend his class but his attendance form has been signed by other student. This system is proposed to overcome these problems.
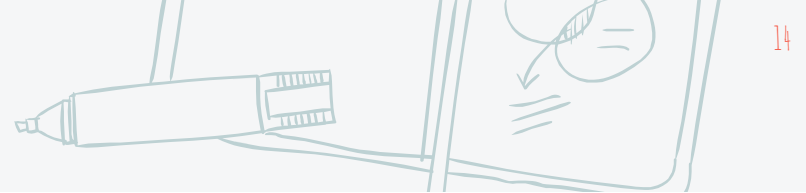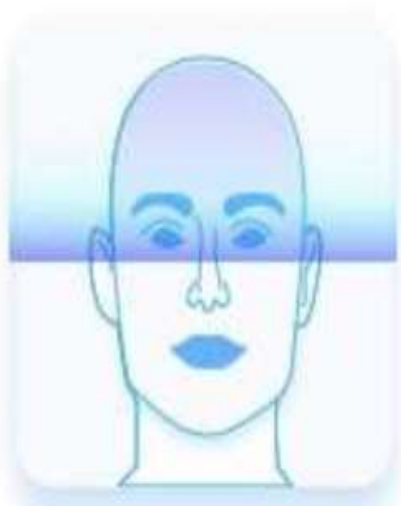
Objective

The prime objectives of research are:

✗ To discover, verify and test new and important facts.

✗ To analyses an event or process or phenomenon to identify the cause and effect relationship.

✗ To develop new scientific tools, concepts and theories to understand scientific and nonscientific Problems.

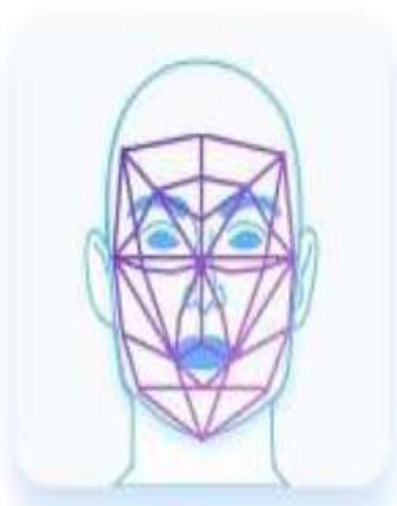✗ To find solutions to scientific, non-scientific and social problems.

PROPOSED SOLUTION

❖ It's take less time.

❖ It's built for automating the processing of attendance.

❖ It also enhances the speed of performing attendance task easily.

❖ After recognition, it will mark the attendance of the recognized student and update the attendance record.

❖ The admin will be able to print these record details afterward.

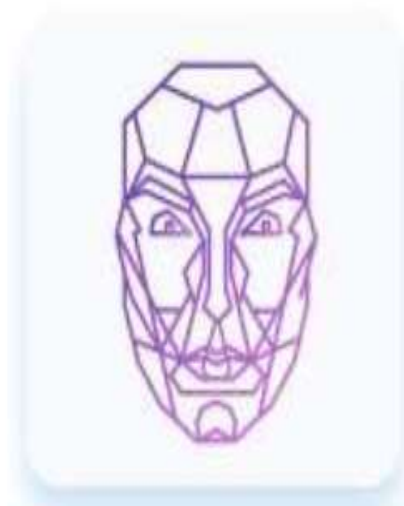**CAPTURE**   **EXTRACTION**   **COMPARISON**   **MATCHING**

IMAGE PROCESSING:

acquire RGB image

convert RGB image to gray scale

apply detection

extract face from image

resize extracted face image

recognize face
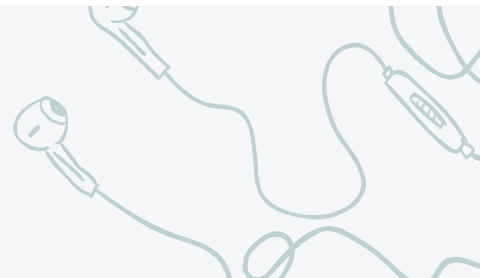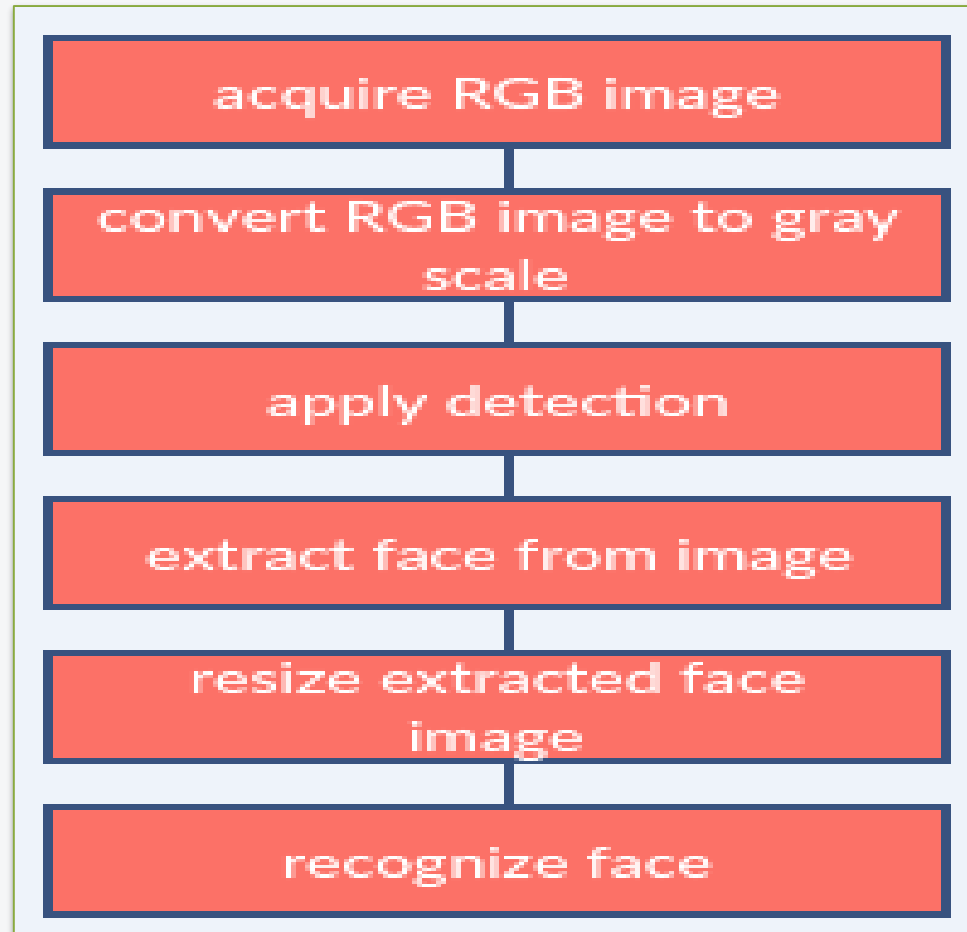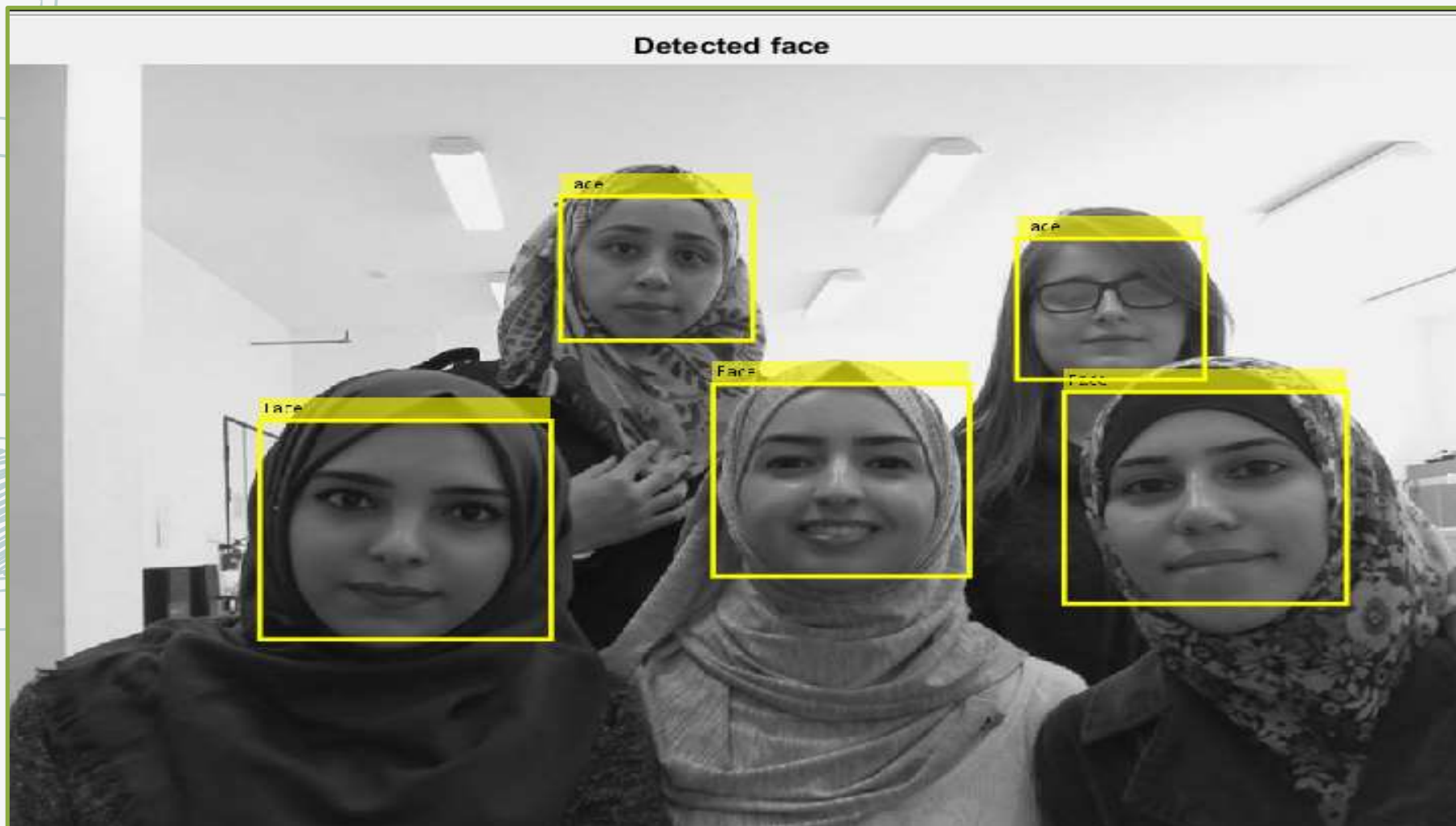
FACE DETECTION:

✖ Face detection is a computer technology used to identify human faces in digital images by determining the location of the faces in the image and extract sub images for each face.
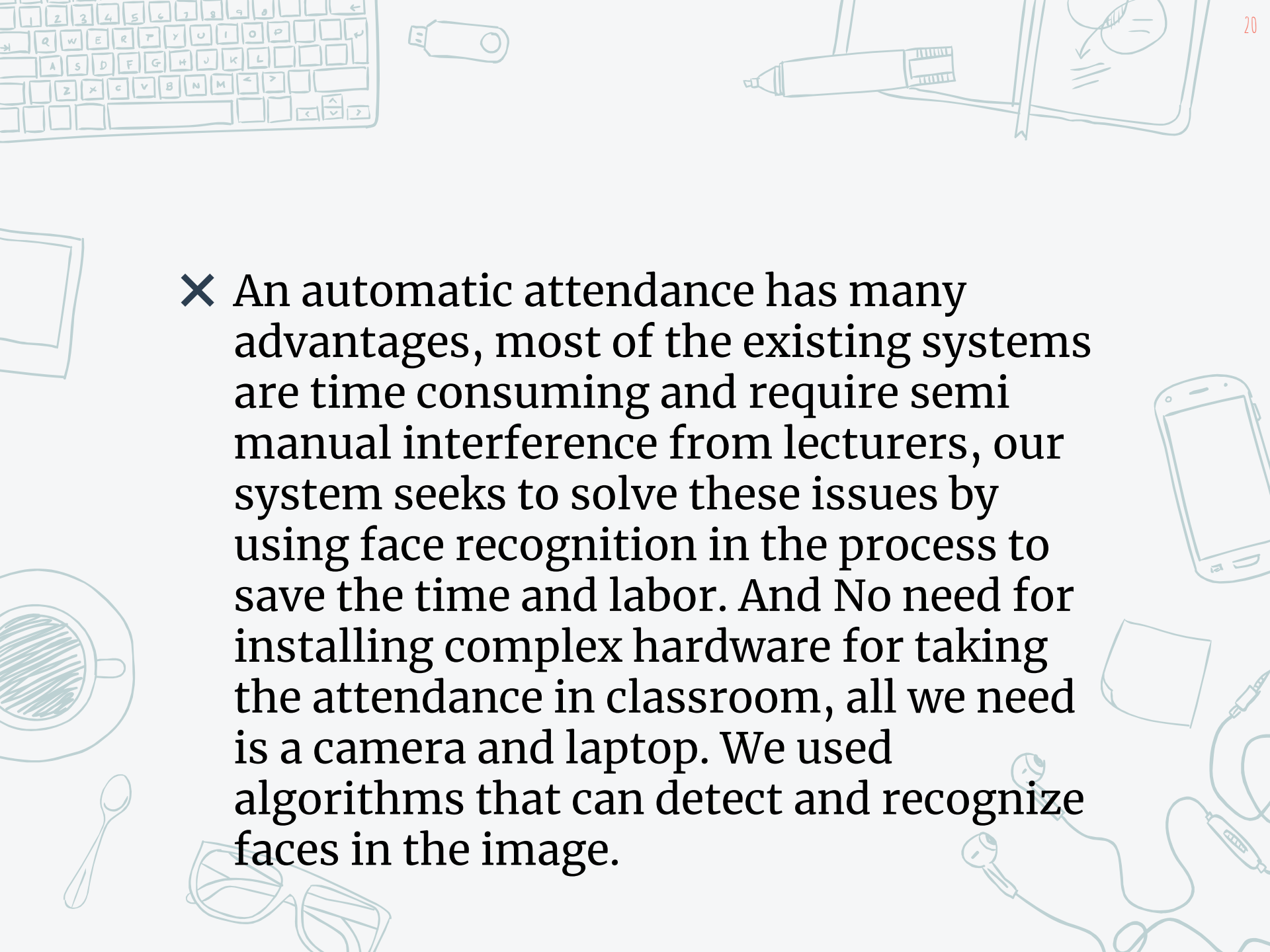
Detected face

THE PROBLEM THAT WE FACED

In our project we have faced many of problems and we have overcome them:

1- Download Python and library for it on OpenCV.

2- Version of the OpenCV and Python.

CONCLUTION

✕ From our experiment, we noticed the face recognition was sensitive to face background, light, and head orientations. This technique described the accurate and efficient method of automatic attendance in the classroom which could replace the traditional method.

✖ An automatic attendance has many advantages, most of the existing systems are time consuming and require semi manual interference from lecturers, our system seeks to solve these issues by using face recognition in the process to save the time and labor. And No need for installing complex hardware for taking the attendance in classroom, all we need is a camera and laptop. We used algorithms that can detect and recognize faces in the image.

FUTURE WORK

✕ Automatic attendance system can be improved by increasing the number of features which can be extracted to increase accuracy of face recognition. Once the software is developed and tested properly, it could be improved to cover full institutions such as the faculty of engineering.

Thanks!

To All