QR Attendance System Requirements Analysis Document (RAD)

Ceng 396 - Software Engineering

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1. Introduction

i. Purpose of the system

The aim of this document is; delineate the project which called QR Attendance System. We developed a attendance system for mobile/pc app to save more time for class and we want to get rid of clumsiness of old attendance method.

ii. The scope of the system

The purpose of this project is providing a quick and basic solution for attendance system. The target audiences are teachers who want to count the student number in a class (taking attendance). This mobile/pc application will help them by showing a QR code on the teacher's screen for 10 seconds so students can scan the QR code and teacher can see who is in the class or not. After 10 seconds the attendance will be locked down so students can't send the QR code picture to their friends who want to be in attendance but not in the class. We use Java and PHP in our project. We are implementing our project using Android Studio and MySQL. With Android Studio students allowed to scan QR Code on screen and provide the class polling. MySQL has enabled us to keep polling data.

iii. Objectives and success criteria of the project

By creating a attendance system our objective is making a simple and user-friendly system that students and teachers saves time with a practical and technological method. Our success criteria is a creating a fluently and fully functional QR Attendance System.

iv. Definitions, acronyms, and abbreviations

IDE: An integrated development environment (IDE) is a software suite that consolidates basic tools required to write and test software.

v.References

- MySQL
- Java Programming Language
- Android Studio IDE
- Stack Overflow

vi.Overview

We will apply the attendance system for schools. Users will login to the app with school mails and scan the QR code. Once the scanning is completed, they will be seen as in the class. This will create practicality and time saving with technology involved.

2.Current system

Java, MySQL are all connected during creating our system.

3.Proposed system

i.Overview

For mobile Android operating system and for PC any browser that owns internet connection are able to run the system.

ii.Functional requirements

User Log In:

1. A user enters mail and password.
2. The user logs in as a student via role selector.
3. The user logs in as a teacher via role selector.
4. Each user are able to access different types of data.

QR Scanning for Students:

1. After log-in students automatically directed to QR Scanning Screen.
2. User will allow the camera of her/his mobile phone.
3. With stable angle app will scan the code and sends info to database.

iii.Non functional requirements

a.Usability

After login, the user can make a polling with using mobile phone camera. The attendance can be displayed in list format in DBMS. Exit button on Android installed device to exit the system is sufficient.

b.Reliability

QR Attendance System has own security system for users which does not allow access of other users information and other owners pets.

c.Performance

There is no problem in performance. Our minimum requirement is a standard computer/mobile with electrical and internet connection.

d.Supportability

Our system supports any browser and Android device with an internet connection.

e.Implementation

In our project, we use java and Android Studio with MySQL database system.

f.Interface

The interface is working in Android device or standart PC. The interface may vary according to the user.

g.Packaging

Our system is accessible via Android devices or standart PC which have an internet connection.

h.Legal

Ownership and idea are specific for us except frameworks.

iv.System models

a.Scenarios

1.Students or teachers can log in email and password.

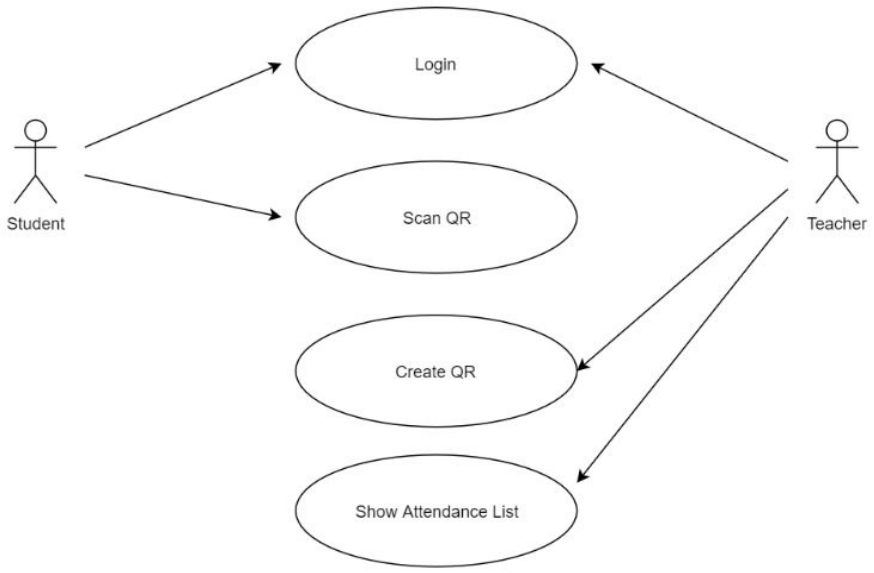
2.Teacher can create a QR Code for specific attendance system after log-in.

3.Students can scan the QR Code after log-in.

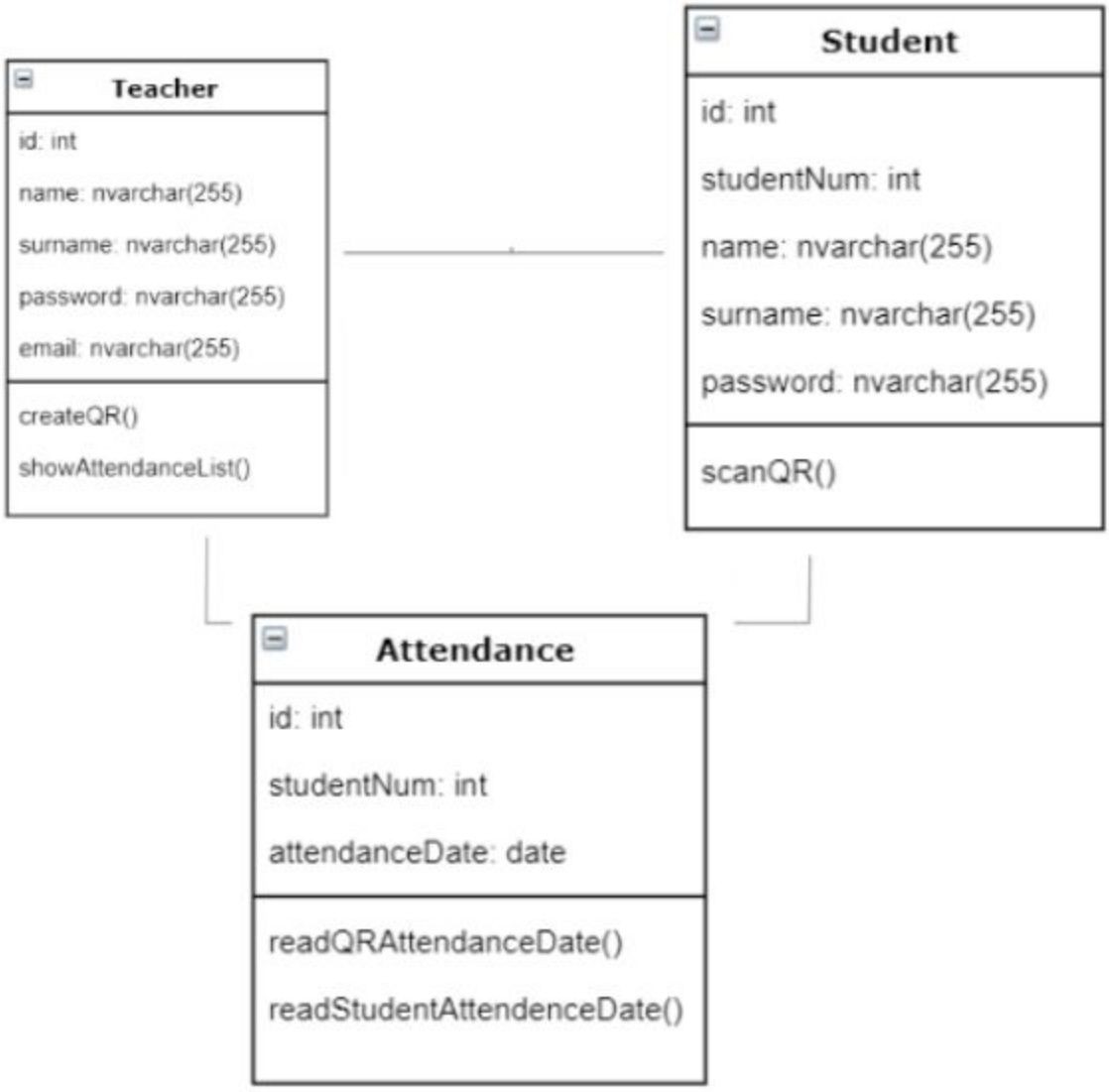
4.Teacher can view the attendance list via database.

5.Students or teachers presses the log-out button for quit the system.

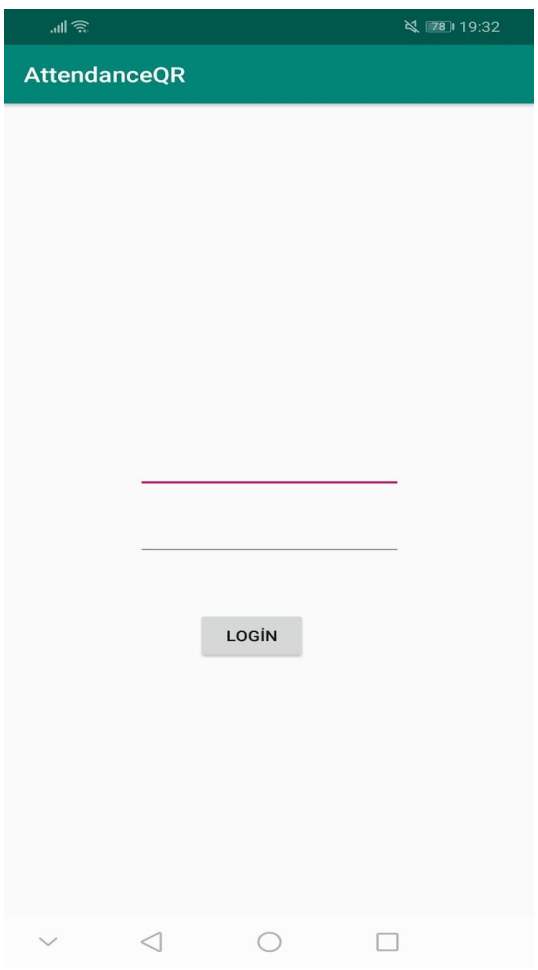
b. Use Case

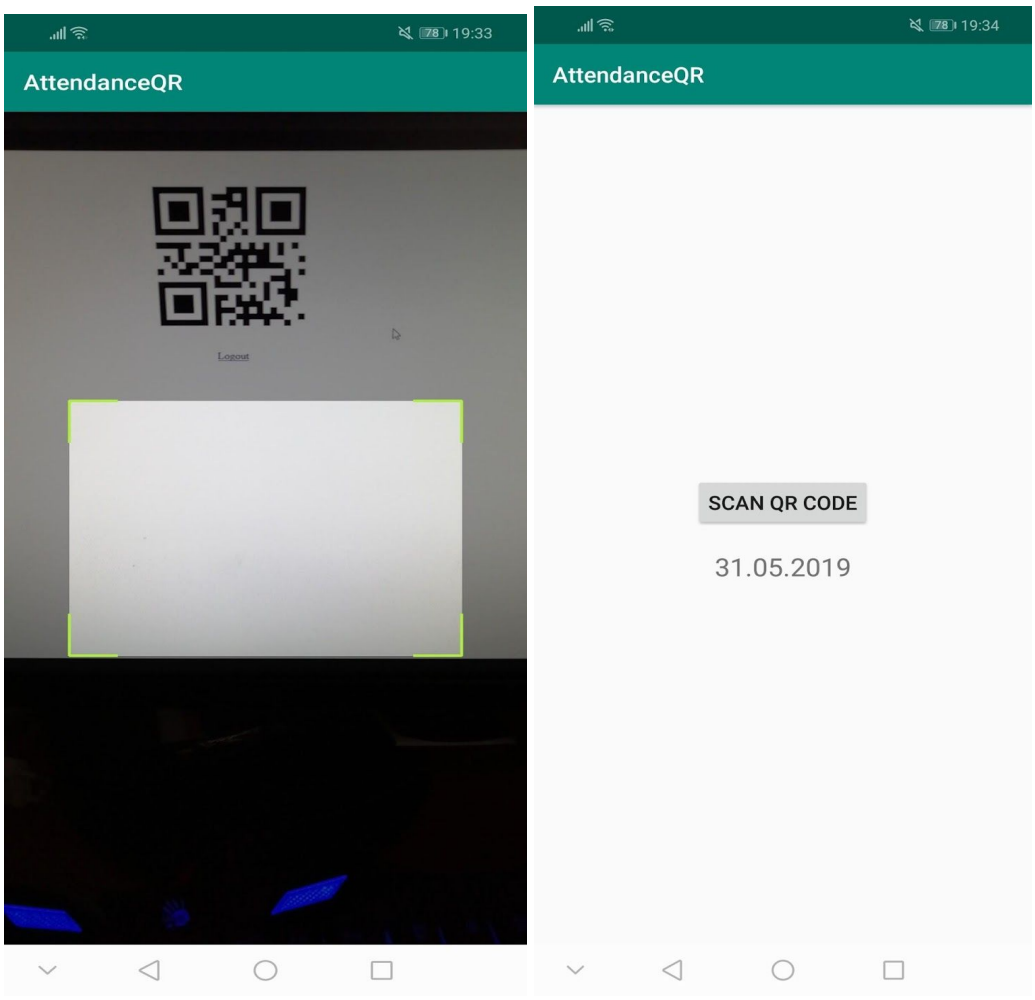


c. UML Class Diagram



d. User Interface





4. Glossary

Java: Programming language

PHP: Web Development language

Mysql: Database

Teacher: User with access to create QR and view tables

Students: User with access to scan QR code