**AttendEaze**

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* **Motivation and background:**

We were motivated to create an app that would reduce teaching assistants’ workload. By creating the AttendEaze attendance app, we were able to do this.

* **Purpose:**

A smart attendance system that offers an automated attendance tracking system that can precisely record student attendance and prevent any method of falsely getting your attendance in as in case of pen and paper attendance method.

* **Methodology:**

Flutter is used to make frontend of the app, hence mainly it is dart based making it easy to compile it for cross platform (Android & Ios).

For managing data of user, we used PostgreSQL database hosted on local machine, allowing us to do queries efficiently.

Flask which is framework of python is used to build the backend that handle all queries, authentication, control routes, etc.

Lastly, we connected our frontend with backend by building REST APIs, hence completing the structure of app.

**Details:**

* Used QR code scanner flutter package to implement the scanner functionality.
* Used Google API to implement google authentication for security.
* Used Drive API to save attendance sheets to users google drive.

**Features:**

* Security of Google OAUTH
* Separate user-friendly interface for both users (students and teachers)
* Continuous batch scanning of QR codes for easy usability
* Attendance sheet directly stored to users Drive for easy management of files.
* Integrated a unique class-code in QR codes to authenticate every QR code before allowing attendance.
* Attendance is only marked if QR code is scanned and verified from authorized teachers accounts.

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* **Results And Discussion:**

When we got this project, we were very excited and got to work right away. Since our first group discussion, every single person in the group has been highly motivated to develop a brilliant project concept. We finally settled on the concept of creating a smart attendance app based on QR code after much deliberation and proposals being rejected.

At the end we also discussed some new features that will be added in the app in the future like: A secured QR code masking integration to stop QR code duplication or sharing in any possible way, dark theme, material you theme support for android 12 and up, push notification when a class starts for respective students.

* **Conclusion:**

We created an app that uses a QR code to track attendance and sends the professor/teaching assistant an excel file of the attendance for that day to his Google Drive.