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IM22A
09.08.2024

Facelogin Calendar App

During a project week, we developed a calendar app that allows users to log in using facial recognition via a webcam. The project was planned and implemented as a group, with Python being the primary programming language used.

Initial Situation

As part of the practical training project week, we were required to plan and execute a project in a group. The group formation and initial rough project planning were done well in advance, allowing us enough time to prepare and, if necessary, learn the required programming language. Our initial plan was to develop an application where users could log in using a fingerprint sensor. Since I had limited experience with Python before the project week, I used YouTube to learn the basics.

Goal

The goal of the project week was to implement the project according to the self-defined guidelines, which would later be used for evaluation. Another key goal was to collaborate effectively and efficiently as a team.

Implementation

As we began the implementation, we encountered an unexpected problem: The fingerprint sensor built into the laptop could not be used, as there were no available APIs and access to the fingerprint data was blocked by the system. Therefore, we decided to change the project and submitted a new project proposal. We developed a Python web application where users could log in using facial recognition.

We used the webcam and a Python library called face-recognition for this purpose. The implementation went smoothly, and we were able to execute everything as planned. With some time left, we added an extra feature where users could access a calendar after logging in. In this calendar, they could customize the colors of events and drag them around. Each user has their own data stored in a database (including passwords). Additionally, we implemented both a dark mode and a white mode.

Result

We were very satisfied with the result and were able to meet all the requirements we had set after the project change. We believe that this app could be very useful in everyday life. I have already identified several potential improvements, such as managing multiple calendars, sharing them with others, and receiving notifications when an event is upcoming.

Insights

Through this project, I gained a lot of new knowledge, especially in Python. I learned how to effectively use Python libraries and improved my teamwork skills. This project not only provided me with technical knowledge but also highlighted the importance of effective collaboration within a team.

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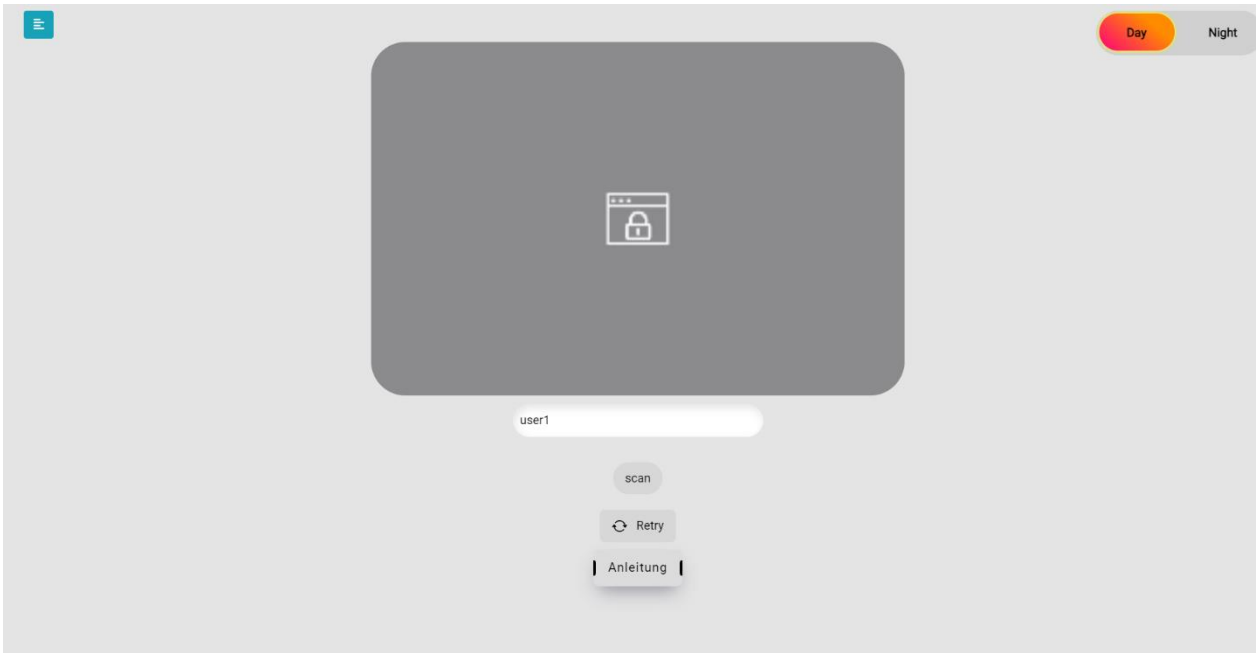
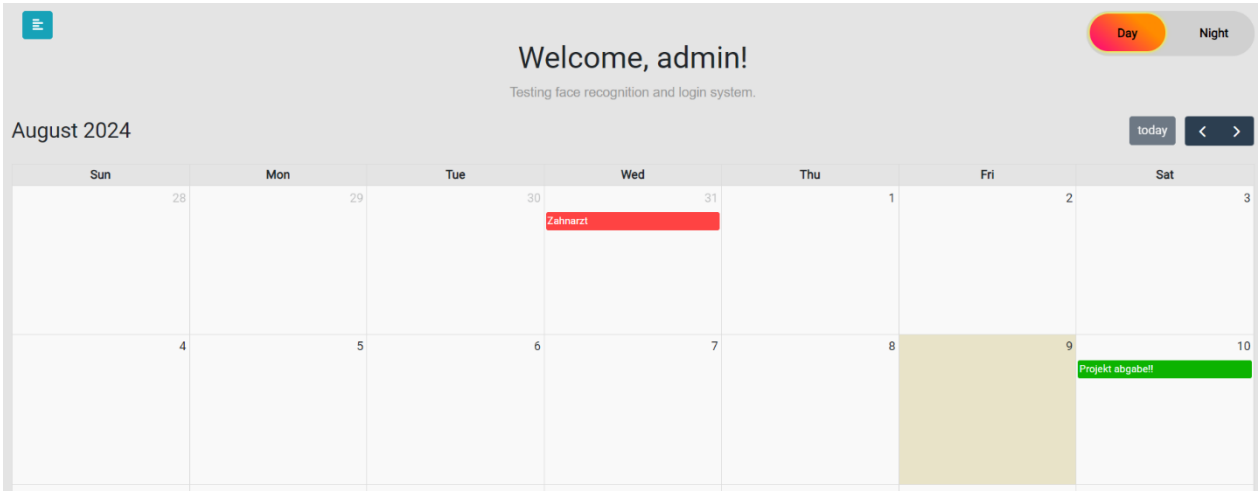
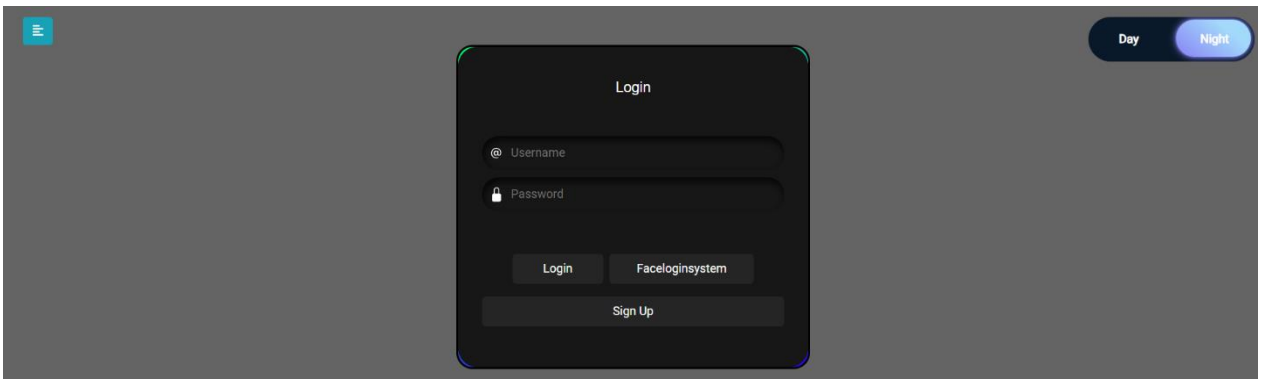


Screenshot login via face-recognition



Screenshot calendar



Screenshot login with dark mode