POLYTECH GRENOBLE

" Polytech SI "
Your daily schedule !

GRENOBLE INP UGA

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Context

Polytech Grenoble is an engineering school currently using ADE as a scheduling tool. ADE is a private service and there is no way to access and manage the timetable by Polytech Grenoble staff. This means that each time a teacher for example needs to modify the timetable, he/she will have to send an email to the Polytech manager in charge of the communication with the ADE administrator, who in turn will send a request to this administrator to make the changes. The procedure is therefore complicated, inefficient and time consuming. The project focuses on the development of an alternative to ADE, as part of the ongoing evolution of the information system of Polytech Grenoble. The project team has already developed several tools, including a prototype of a new core information system.

Polytech SI is for you !

The project is designed for Polytech Grenoble community, including staff and students who use the current information system and tools such as ADE for scheduling. The project may also be of interest to anyone involved in the management and evolution of information systems in educational institutions. The project goal is to provide a more effective and user-friendly tool for scheduling courses and events at Polytech Grenoble.

Description

The prototype will consist of two parts : a backend extension of a previous Python-based project using FastAPI and SQLAlchemy, and a frontend component that may use React and display calendars using FullCalendar.

FastAPI   SQLAlchemy
PostgreSQL   React
docker   ALEMBIC
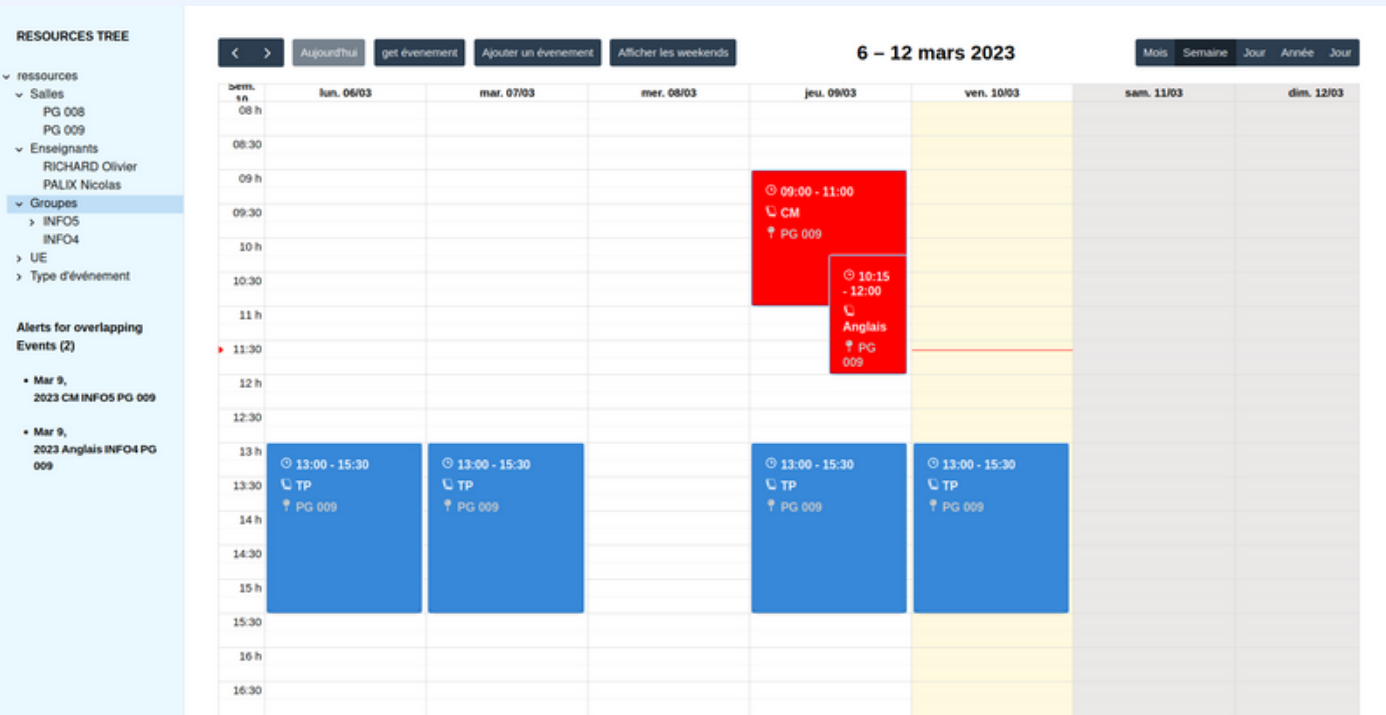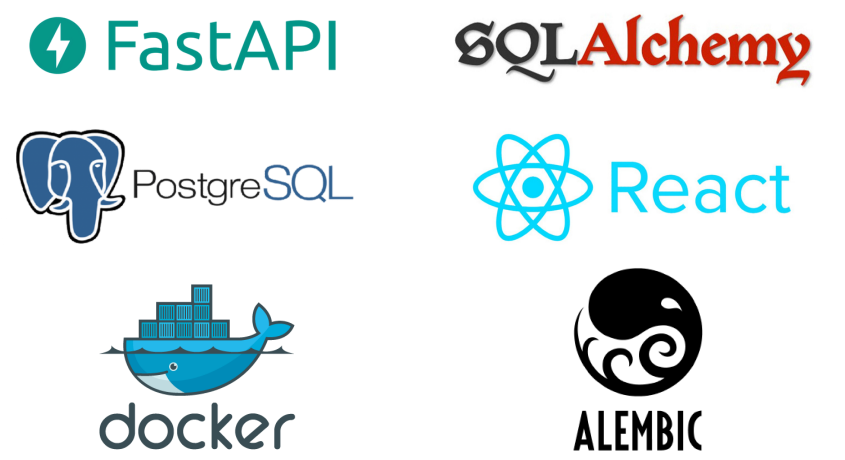
The Graphical User Interface

- Our Graphical User Interface (GUI) allows users to schedule and manage events easily. It provides a customizable calendar that displays events in different views such as day, week, month, and agenda.
- To schedule an event, users can click on a date and time on the calendar and fill in the details such as the event name, description, location, and attendees. The app can then check for any overlapping events and alert the user if there is a conflict (red events and the overlapping events list on the sidebar). This feature helps to prevent double booking of rooms or teachers and ensures that events are scheduled at appropriate times.
- The GUI may also have filters or search options to help users find specific events based on various criteria such as the room, teacher, group, or event type. Users can view the events in different colors or categories to easily identify the type of event or group it belongs to.

Architecture
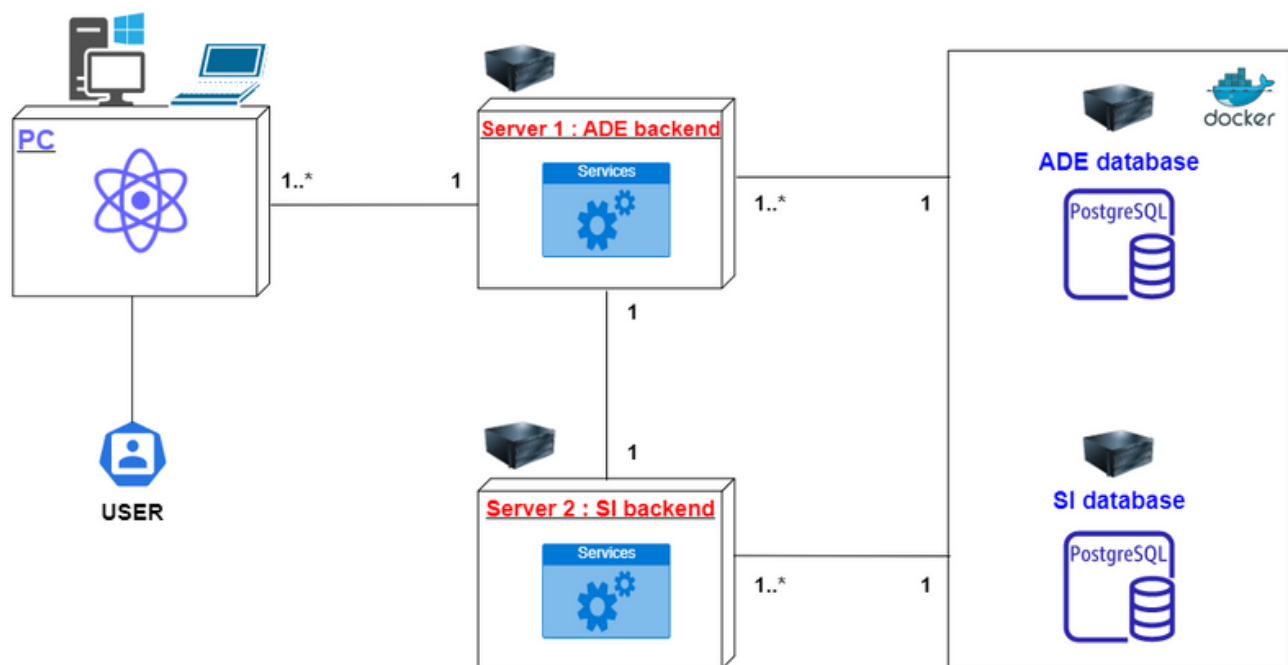
The third layer contains the databases related to the ADE backend and SI backend.
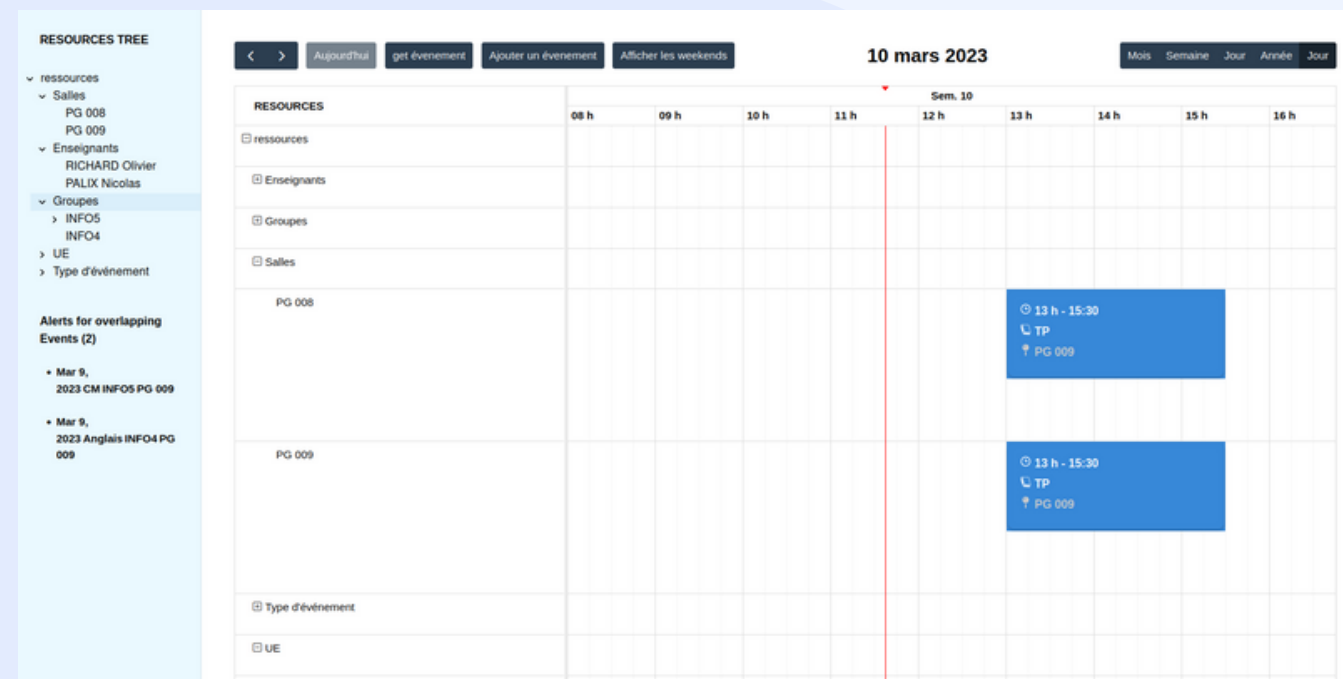
In the first layer, users use their PC to access the platform. An interface is displayed and will allow them to interact with the application while requesting the backend server (for example a student will be able to consult his timetable, a course director will be able to modify the information related to his course...).

The second layer contains the business logic of the application and is invisible to the users. The ADE backend server will receive client requests, process them and return responses to users, which makes possible the user interaction with the application interface. The SI backend is part of the project that already existed and was developed by an intern, but it does not intervene in the business logic of our application. On the other hand, this server contains important data that the ADE backend needs when processing user requests. For this, a communication has been established between the ADE backend server and the SI backend server in order to retrieve data when necessary instead of duplicating them in the ADE backend.

Conclusion

In conclusion, the Polytech SI is a significant project, and despite starting from scratch, we have successfully delivered a usable product for production. The progress we have made thus far sets a strong foundation for future students to build upon, and it is highly likely that others will take up the mantle to finalize the work. Our achievement in creating a usable tool for scheduling courses and events at Polytech Grenoble will have a positive impact on the institution, and the effort we have put in has been commendable.