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Applied Programming Concepts

Integrate and Configure

- Authentication – The purpose of this component is for user login and role management. The tool that can be used to implement this is Firebase Auth or Auth0.
- Database – The purpose of this component is to store user, course, and schedule data information. SQL can be used for implementation since it is efficient in organizing data, retrieving data, and creating tables.
- Frontend UI – The purpose of this component is to work as an interface for all user types. This project of a webpage system will be created using Flask which is a lightweight and flexible Python web framework. Its easy access to build web applications makes it a good choice for the main base of the system.
- Searching and PDF export – searching features will be implemented using. Whoosh would be using to implement searching while ReportLab can be used to print schedules for the users.

WEEK	TASK
Week 1	Create authentication and database components using Auth0 and SQL.
Week 2	Create a project using Flask to create a system application.
Week 3	Implement authentication and database components into webpage created using Flask.
Week 4	Implement search features and PDF exporting into webpage.
Week 5	Testing for any bugs and fixing them.

Reference:

<https://www.w3schools.com/>

<https://firebase.google.com/products/auth>

<https://getbootstrap.com/>

<https://reactjs.org/>

<https://www.mysql.com/>

<https://www.reportlab.com/opensource/>

- This project of a webpage system will be created using Flask which is a lightweight and flexible Python web framework. Its easy access to build web applications makes it a good choice for the main base of the system.
- With respect to the database, SQL will be used. It is efficient to organize data, retrieve data and create tables.
- When it comes to the security of the webpage, Flask has login extension that can be used to manage the users login and logout sessions.