TeamGI: General Inventory Application

Tochy Egeonu, Jonathan Banda, David Rademacher, Ian McKenzie, Jacob Ryan

Vision

- Managing inventory is one of the most crucial administrative tasks of a well-organized institution.

- The implementation of a database interface that handles inventory management will make the process more efficient (requiring fewer man-hours to complete) and less prone to error.

- Database systems are optimized for the kinds of tasks most needed by the senior design lab: creation of data, removal of data, and sorting and presentation of data.

- When combined with an accessible interface, the General Inventory tool provides a streamlined solution to inventory management that will save costs and allow the program to allocate resources where they matter the most.
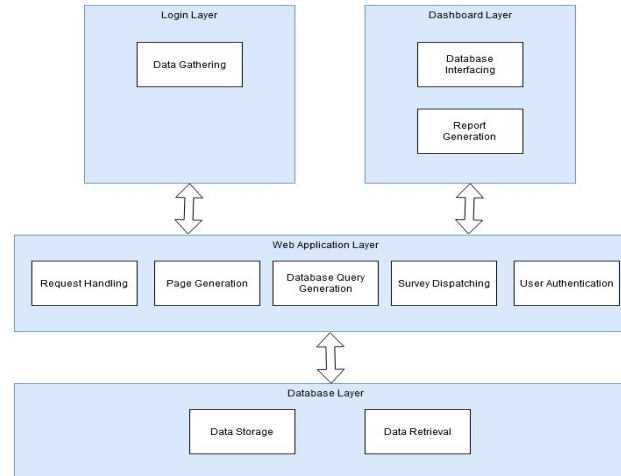
Mission

- The senior design lab is currently in need of managing the items it stores, lends out, and receives by students enrolled in senior design.

- Senior design lab would like to be able to easily manage and review all of the equipment that current students borrow.

- We will build a database backed website to host as a centralized source for the senior design lab to gather and store information regarding items lent out.

- The system will need to work in a cyclic manner allowing a user to identify the student checking in/out, process item to be checked in/out, and update the system according.

- Other features such as report generation and reminders may be implemented to assist the senior design lab in recovering borrowed items from students or take action accordingly.
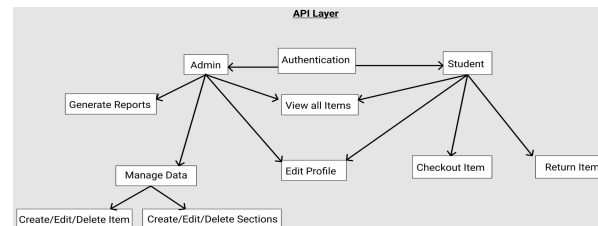
Key Requirements

- Create users with different privilege levels (user/admin)
- Add, remove, and edit items within the database
- Visualize department inventory status
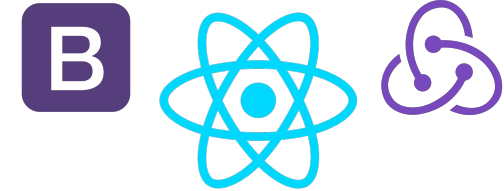- Checkout & return items
- Generate reports

ADS Diagram

Web Application (API) Functions

Design Details

Front End
Bootstrap, React, Redux

Back End
Django, MySQL

Future Work

- The application serves its intended purpose of helping the CSE department manage its inventory of devices.

- Sticker labels can be generated and associated in the database to make the process of checking out/returning items efficient and secure.

- Report generation can be expanded as use cases for the application develop; with more data, it will be clear which kinds of reports are most useful to administrators for tracking inventory.

- The application may be scaled to run on different machines and allow for multiple terminals, enabling users to check in/out at various locations.

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