

CEN3031 Fall 2025 Challenge Statement

Section 21585

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As college students, we all often face challenges when it comes to fully engaging with material, staying organized, and retaining knowledge over time. Whether it's understanding complex concepts, managing deadlines, or developing consistent study habits, many learners struggle to find systems that support both comprehension and productivity. For this project, your team will design a software solution that helps students succeed academically. For instance, you could make learning more engaging or streamline how they organize their studies. This could mean building an interactive platform that teaches a subject in an innovative way, or developing tools that help students manage their time, track learning progress, or prepare for exams.

Possible ideas might include flashcards that review a concept, intelligent scheduling that balances study time with rest, gamified incentives to encourage consistent studying, or digital study communities where peers can share tips and collaborate. Whether your focus is on teaching a subject more effectively or helping learners stay productive and organized, your platform should create a sense of sustained engagement and provide practical support for long-term academic growth.

While this system is not required to be developed to be accessed via the web, it must be able to be run on multiple different machines while accessing a central database (you will run a database locally for testing and development, but it should function as if you were connecting to a database on a central server).

Course Specifications:

- Implements user authentication with at least two distinct user types (e.g., administrator and member)
- Implements a dynamic database of user and item data
- Implements one or more “operations” involving some form of frontend-backend-database communication

Course Expectations:

- Databases can use any existing dataset or have dummy data. Databases using datasets should have at least 100 items. There can be exceptions based on the specific project.
- New user creation/registration should be available
- UI design should contain elements commonly found or expected such as a user profile, login, logout.
- Consideration for design aesthetics
- System should be dynamic and responsive