

CEN 4033 Secure Software Engineering Project Description

Students are asked to work in teams to design and implement a **Pantry Inventory Management System**, which is a simple web-based app that allows users to track the items they have in their pantry, manage expiration dates, and create shopping lists for missing items. The system enables users to add, edit, and remove pantry items, while also providing features for setting reminders for products nearing their expiration dates. Core features are listed on the next page. Teams are asked to create Software Requirements Specification (SRS), design documents, and implement a software functional prototype, using one of the SDLC software development models. The list of deliverables for the team project is shown below.

Deliverable	Due Date
Deliverable #1 (7.5%): Provide the following information: <ul style="list-style-type: none">• Software Requirements Specifications (SRS)• Use Case Diagram	June 1, 2025
Deliverable #2 (7.5%): Provide the following information: <ul style="list-style-type: none">• Software design and architecture specification• UML Diagrams	June 8, 2025
Deliverable #3 (15%): Final Project Prototype: <ul style="list-style-type: none">• Source Code• Testing results: unit testing, integration testing, and system testing results• Demo video• Final Project Report (including revised versions of deliverables #1 and #2 and testing results)	June 15, 2025

Project Worklog Setup [Due: May 23, 2025]

Setup a project worklog using the provided template, and share it via OneDrive with access granted to the course instructor (melish@floridapoly.edu). Each individual is required to update the log when performing any activity on the project. This log should include the work performed, when the work was performed, and how long was spent. It should be a regular activity for group meetings to review these logs.

Core Features of the Pantry Inventory Management System

- **User Authentication**
Users must be able to sign up and log in securely. This ensures that each user's pantry inventory is private and protected. Passwords shall be securely stored.
- **Pantry Item Management**
Users can add new items (name, quantity, expiration date), update existing items, and delete them. Each item is linked to a user's account and can only be modified or removed by that user.
- **Shopping List Creation**
The system will allow users to create a shopping list based on items that are out of stock or near their expiration date. The list can be easily marked as "purchased" once the user buys the item.
- **Expiration Date Reminders**
Users will be notified or reminded about items that are nearing their expiration date. This can be as simple as a list view that highlights items expiring soon, and can later be expanded with more advanced notification features.
- **Basic Security Measures**
 - **Input validation:** Ensuring that all user inputs (e.g., item names, expiration dates, and quantities) are clean and free from malicious code.
 - **Role-based access control:** Users can only see and edit their own pantry items.
 - **Session management:** Ensures that the user stays logged in securely during their interaction with the system.

Assessment of Individual Contribution: The project is designed to be completed as a group effort, rather than by an individual carrying the entire workload. To ensure fair evaluation, each student is required to complete peer evaluations at the end of the project. Contribution is assessed as a scalar multiplier, which is applied to the team's overall project grade. This multiplier ranges from 0 to 1, where 0 indicates minimal support provided to the team, and 1 indicates active and productive involvement. For example, if a team earned an overall project grade of 84, members with a contribution of 1 would receive the full grade of 84. However, if your individual contribution is rated at 0.5, your grade would be reduced to 42. Individual contributions are primarily determined through peer evaluations and worklog. Therefore, the project grades assigned throughout the course are considered provisional and subject to deduction for individuals with less or no contribution.