

# CEN3031 Summer 2024 Project - Functional Requirements

## Section 20610

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The below list are the **functional requirements** for the project described [here](#). Note that course requirements as described in the linked document or on Canvas still apply even if they are not listed here (e.g., the implementation requirement of implementing a database and not just reading in a local CSV file). If there is something that is not listed in this document or that is unclear, you can ask your TA to clarify. Additionally, these are considered the minimum requirements for each of the components of the project, you are free to include additional features if you would like as long as they do not contradict the listed requirements.

1. Authentication Requirements
  - a. All accounts must have username/password authentication.
  - b. Plaintext passwords must not be stored in the database (the minimum requirement is to use a basic hash function).
  - c. New service user accounts should be able to be created from the interface with a basic registration form.
  - d. New employee or administrator accounts must only be able to be created from the interface from an administrator account (you will need to instantiate the first admin account).
  - e. When logged out, the only available operations should be to log in or register a new account.
2. Account Permission Requirements
  - a. Service user accounts should be able to:
    - i. View their active tickets and prior ticket history.
    - ii. Open a new support ticket via a form.
    - iii. Start a chat with an IT employee (with or without a corresponding ticket).
    - iv. View prior chat history.
  - b. Employee accounts should be able to:
    - i. View their availability/scheduling along with a calendar view.
    - ii. View tickets that have been assigned to them along with scheduling priority.
    - iii. Modify the status of tickets, including ticket resolution.
    - iv. Interact with service users requesting support via chat.
    - v. Log hours working on tickets.
    - vi. Create time estimates for tickets they have been assigned
  - c. Administrator accounts should be able to:

- i. Manage employee account information (including creation and deletion of accounts).
- ii. Assign employee availability scheduling.
- iii. Assign employees to
- iv. Manually override the automatic scheduling/assigning of tickets.
- v. View the same ticket information as employee accounts, but for all tickets/employees.

### 3. Ticket Requirements

- a. Tickets should be created via a form.
- b. Tickets should be labeled by categories (e.g., repair requests, account help, etc.)
- c. Tickets should be assigned to IT employees, both automatically based on scheduling availability and also being reassigned by an administrator.
- d. Tickets should include logs of corresponding chat sessions.
- e. Upon creation, an employee should be tasked with providing the ticket a time estimate so it can be scheduled.

### 4. Chat Requirements

- a. The system should support asynchronous chat associated with each ticket between the ticket submitter and any IT employees that are assigned to the ticket.
- b. Live support chat should be possible for questions that are not associated with a specific ticket. (**Note:** this is the lowest priority requirement and you should look into finding existing code or libraries to utilize when implementing this feature)

### 5. Scheduling/Calendar Requirements

- a. After being assigned a time estimate, tickets should be automatically assigned to the earliest available employee that can work on that category of ticket.
- b. Tickets should be scheduled on a first-come, first-served basis.
- c. Scheduling should be able to be overridden by administrator accounts.