Project Brief

## Project Purpose

Develop a web-based application for a non-profit organization to assist students in managing cleaning and tidying responsibilities in shared accommodation facilities, promoting cooperation and a cleaner living environment.

## Project Scope & Deliverables

* Develop a user-friendly application for managing cleaning responsibilities in shared student accommodations.
* Implement a secure login/registration system with options for alternative logins and 2FA.
* Allow creation of household groups and task management.
* Incorporate scheduling features and task rotation.
* Introduce a reward system for task completion.
* Ensure scalability and simplicity in design.

### Deliverables

1. Registration and Login Module
   * Secure login system with email and password.
   * Alternative login options (e.g., Google, Facebook).
   * Two-factor authentication (2FA) for enhanced security.
2. Household Group Management
   * Ability for users to create a ‘household’ group.
   * Invite and manage members within the group.
   * Assign roles or permissions to group members.
3. Task and Rule Assignment
   * Facility to add cleaning tasks (e.g., hoovering, washing dishes).
   * Option to set frequency and deadlines for each task.
   * Rule creation for task assignments (e.g., rotate tasks weekly).
4. Scheduling and Availability Tool
   * Personal calendar integration for each user.
   * Availability input feature to avoid scheduling conflicts.
   * Automated task scheduling based on availability and rules.
5. Rota Generation Algorithm
   * Dynamic rota generation based on set rules, tasks, and member availability.
   * Ability to manually override or adjust the generated rota.
6. Task Completion and Reward System
   * Feature for users to upload a photo as proof of task completion.
   * Points awarded for on-time task completion.
   * System to track and display points for each user.
   * Penalty system for late or incomplete tasks.
7. User Interface
   * Intuitive and student-friendly interface design.
   * Responsive design for desktop and mobile access.
   * Dashboard view for quick access to tasks, rotas, and group info.
8. Push Notifications and Reminders
   * Automated reminders for upcoming tasks.
   * Notifications for task completion confirmation.
   * Alert system for upcoming deadlines or late tasks.

## Team Roles & Research Areas

As an Agile development methodology is being used the team members will not have specific development roles such as designer, front/back-end developer, database modeler, etc but will instead all have the general ‘developer’ role and will be assigned tasks to complete per sprint. There are however a couple of roles that will be assigned which do not decompose easily.

### Roles

#### Calum

* Developer
* Product Owner
* Scrum Master

#### Jack

* Developer
* Project Manager
* Lead Designer

#### Mark

* Developer

#### Mitchell

* Developer

### Research Area/s

#### Calum

* Back-end frameworks/languages (Report)
* Gamification

#### Jack

* Designing for accessibility (Report)
* Project management

#### Mark

* Alternative login methods (Report)

#### Mitchell

* Front-end frameworks/languages (Report)
* Gamification

## Initial Project Plan - Agile Sprints

#### Sprint 1: Initial Setup and Design

* **Goals:** Establish project foundation and create initial designs.
* **Deliverables:**
  + Basic project setup and infrastructure.
  + Wireframes for user interface, focusing on intuitive design for students.
  + Initial design concepts for the registration and login module.

#### Sprint 2: Development of Core Modules

* **Goals:** Develop primary functionalities such as registration, login, and group management.
* **Deliverables:**
  + Functional registration and login module with alternative login options.
  + Basic structure for household group management.
  + Early prototype for user interface.

#### Sprint 3: Features Development I

* **Goals:** Develop task and rule assignment functionality, and initiate scheduling tool development.
* **Deliverables:**
  + Task addition and rule-setting features.
  + Preliminary scheduling tool for user availability.
  + Enhanced user interface incorporating the task management features.

#### Sprint 4: Features Development II

* **Goals:** Complete the scheduling tool and start development of the rota generation algorithm and reward system.
* **Deliverables:**
  + Completed scheduling and availability tool.
  + Initial version of the rota generation algorithm.
  + Basic framework for the reward and penalty system.

#### Sprint 5: Integration and Testing

* **Goals:** Integrate all developed features, conduct extensive testing, and gather user feedback.
* **Deliverables:**
  + Integration of all features into a cohesive application.
  + Comprehensive testing of all functionalities.
  + Collection and analysis of initial user feedback.

#### Sprint 6: Finalization, Refinement, and Launch Preparation

* **Goals:** Finalize the application, refine based on feedback, and prepare for launch.
* **Deliverables:**
  + Fully functional and tested application.
  + Refinements and optimizations based on user feedback.