

# **USER REQUIREMENTS SPECIFICATION**

DOCUMENT NUMBER: URS-001

DATE ISSUED: 10/11/24

--

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 2 of 8

## TABLE OF CONTENTS

<b>1. INTRODUCTION.....</b>	<b>3</b>
1.1. Objectives.....	3
1.2. Scope.....	3
1.3. Concerns.....	3
<b>2. PROGRAM REQUIREMENTS.....</b>	<b>4</b>
2.1. Settings.....	4
2.2. Guides.....	4
2.3. Notifications.....	4
2.4. User Interface.....	5
2.5. Summary.....	5
<b>3. DATA REQUIREMENTS.....</b>	<b>5</b>
3.1. User Data.....	5
3.2. Garden Data.....	6
3.3. Plant Data.....	7
3.4. Notification Data.....	7
3.5. Community Data.....	8

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 3 of 8

## 1. Introduction

### 1.1. Objectives

This User Requirements Specification (URS) outlines the development of a virtual community garden platform, U-Plant, designed to assist users in planning, visualizing, and managing their gardens. The platform aims to provide an interactive and intuitive space where users can track plant growth, receive care notifications, and connect with local gardeners to share surplus produce. A key focus of this project is the creation of a user-friendly interface, including visual tools for garden plot mapping and a cohesive visual identity through the app's artwork and logo.

### 1.2. Scope

This URS applies to the design and development of the web version of the community garden platform. The app will feature a personalized garden tracker with timely, customizable notifications, a searchable plant catalog, and visual tools such as growth bars and garden space mapping. Users will also be able to engage with the community through social features, enabling surplus produce exchanges and discussions with other gardeners.

### 1.3. Concerns

While the social features are central to the platform's goals, they present risks related to ethical use and moderation. Implementing user guidelines and moderation tools will be necessary to ensure responsible use and longevity of the platform. In addition, this application will require users to register an account and to provide necessary personal information for accurate functionality. As such, securing any sensitive account information is vital and will necessitate adherence to privacy standards and data protection regulations to safeguard user data.

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 4 of 8

## 2. Program Requirements

### 2.1. Settings

Users will have access to a range of configurable settings, ensuring the platform is adaptable to individual preferences. These include:

- **Appearance Settings:** Users can personalize the platform's look and feel, such as adjusting themes, color schemes, and layout preferences.
- **Accessibility Options:** The platform will offer settings to enhance usability for individuals with disabilities, including text size adjustments, contrast settings, and screen reader compatibility.

### 2.2. Guides

The platform will provide comprehensive guides to assist users in managing their gardens:

- **App Tutorials:** Step-by-step tutorials will guide users through the app's features, ensuring they can utilize all tools efficiently.
- **Gardening Tips:** Users will receive expert advice on various gardening topics, including plant care, soil management, and seasonal planting.
- **Garden Space Mapping:** Visual tools will help users map out their garden layouts, allowing for efficient planning of plant arrangements.
- **Local Garden Planning:** The platform will offer information on nearby community gardens, including locations for seed exchanges and gardening showcases.

### 2.3. Notifications

The notification system will keep users informed and engaged with their gardening tasks:

- Reminders: Users will receive timely notifications for plant care tasks such as watering, fertilizing, and harvesting based on their garden's needs.
- Alerts: Important notifications regarding weather conditions, such as frost or extreme heat, will help users protect their plants.
- Seed Request System: A dedicated feature will allow users to request seeds, and they will be notified when these become available through the community.

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 5 of 8

#### 2.4. User Interface (UI)

The platform's UI will be designed for ease of use and visual appeal, offering several essential features:

- Login/Signup: New users will be able to quickly register, while returning users can securely log in to access their personalized data.
- Dashboard: A dynamic, user-friendly dashboard will provide an overview of the user's garden progress, upcoming tasks, and recent notifications.
- Settings Access: Users can easily access and modify their settings at any time, ensuring the app is tailored to their needs.
- Plant Catalog: A comprehensive plant catalog will allow users to search for plant species, view care instructions, and add plants to their garden.
- Animations: The platform will feature engaging animations, including visual representations of plant growth and garden changes.

#### 2.5. Summary

These program requirements are critical for the platform's overall functionality. They ensure U-Plant provides a secure, customizable, and engaging experience, allowing users to seamlessly plan, organize, and care for their gardens while staying connected with the gardening community.

### 3. Data Requirements

#### 3.1. User Data

The system shall manage user-related information to facilitate account creation, personalization, and community interaction. These user data requirements fulfill the need for a personalized and secure experience, allowing users to tailor the system to their preferences and have control over their personal information. Specifically, the system shall handle the following user data:

##### 3.1.1. Account Information:

- The system shall allow users to create an account with a unique email/username and password to identify themselves within the platform.

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 6 of 8

##### 3.1.2. Personalization Preferences:

- The system shall enable users to input their general location (e.g., city or ZIP code) to connect them with local community features and provide region-specific gardening advice.
- The system shall allow users to select their preferred units of measurement (metric or imperial) to ensure information is presented in a helpful format.

##### 3.1.3. Privacy Settings:

- The system shall allow users to control the visibility of their personal information, such as location and profile details, to others in the community.

#### 3.2. Garden Data

The system shall enable users to input and manage information related to their gardens to facilitate planning and tracking. These garden data requirements enhance the user's ability to plan and manage their garden effectively, providing a

tailored experience based on their specific garden characteristics. Specifically, the system shall handle the following garden data:

#### 3.2.1. Garden Information

- The system shall allow users to create one or more gardens, each with a customizable name for easy identification.
- The system shall enable users to specify the soil type of their garden to provide tailored plant care advice.
- The system shall allow users to record the amount of sunlight their garden receives to assist in plant selection and care recommendations.

#### 3.2.2. Garden Layout

- The system shall provide a visual representation of the garden layout to help users plan and organize their garden.
- The system shall allow users to place plant representations within the garden layout according to their planned or actual positions.

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 7 of 8

### 3.3. Plant Data

The system shall allow users to track detailed information about each plant in their garden to facilitate care and monitoring. These plant data requirements support users in effectively managing their plants, ensuring they have the necessary information to care for them. Specifically, the system shall handle the following plant data:

#### 3.3.1 Plant Information

- The system shall allow users to add plants to their garden by selecting from a searchable plant catalog or by creating custom plant entries.
- The system shall calculate and display the current growth stage of each plant based on the planting date and known growth timelines.
- The system shall enable users to input the health status of each plant (e.g., healthy, pest-infested, diseased) to monitor plant wellbeing.

- The system shall allow users to add custom notes for each plant to record personal observations or reminders.

### 3.4. Notification Data

The system shall generate and manage notifications to assist users in garden care and community engagement. These notification data requirements fulfill the user's need for timely and relevant reminders, enhancing their ability to care for their garden effectively. Specifically, the system shall manage the following notifications:

#### 3.4.1. Notification Management

- The system shall provide timely notifications to users based on their plant care schedules, such as reminders to water, fertilize, or harvest plants.
- The system shall customize notification content based on specific plant data and user preferences to ensure relevance.

<b>User Requirements Specification</b>	Doc. #: URS-001 Rev. #: 0
Authors: Jason S. Beckett F. Cainan G. Alex J. Julian B. Laura L.	Page 8 of 8

### 3.5. Community Data

The system shall facilitate community interactions by managing data related to surplus sharing and community events. These community data requirements enhance the user's ability to connect with others, share resources, and participate in community activities, fulfilling their need for social interaction and support. Specifically, the system shall:

#### 3.5.1. Surplus Sharing

- The system shall allow users to create posts offering surplus produce or gardening items to the community.
- The system shall enable users to specify the item name, quantity, availability timeframe, general location, and photos.



- The system shall enable other users to view surplus item posts and express interest in available items.

#### 3.5.2. Community Interaction

- The system shall provide options for private messaging to facilitate detailed arrangements while maintaining user privacy.

#### 3.5.3. Community Events

- The system shall allow users to create and view community event listings, including event titles, descriptions, dates, times, and locations.
- The system shall enable users to indicate their interest or participation in events to foster community engagement.