

# e-Gardening

## Authors

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## 1. Introduction

### 1.1 Purpose

The purpose of this document is to offer a detailed documentation about the e-Gardening Web Application. It will go through all the functionalities of the Web Site and it will provide information and explanation about each web page.

### 1.2 Document Conventions

This Document was created based on the IEEE template for System Requirement Specification Documents.

### 1.3 Intended Audience and Reading Suggestions

Normal users who wish to use the application for learning how to garden.

### 1.4 Product Scope

e-Gardening has been developed for the purpose of teaching the users how to garden properly.

### 1.5 References

1. [\*e-Gardening Github page\*](#)
2. [\*IEEE Template for System Requirements Specification Documents\*](#)

## 2. Overall Description

### 2.1 Product Description

The e-Gardening application was developed in order to help people more or less passionate about gardening improve their knowledge and abilities using the courses on the site.

### 2.2 Product Functions

The web application offers three level courses each of them having a few modules. The levels are: Beginner, Intermediate and Advanced. These modules include general information about gardening, relevant images, tasks and pieces of advice. In this application the user can log in and have access a private profile where he can add what plants he would like to grow and the application will send him notifications regarding each plant's needs. Any user can also address questions about anything related to gardening and he will receive an answer as soon as possible. All the questions and answers are placed on a special page.

Home page: central point of navigation to the rest of the pages within the website

- login button: redirects to a login pop-up;
- beginner: redirects the user to the Beginner course;
- intermediate: redirects the user to the Intermediate course;

- advanced: redirects the user to the Advanced course;
- flowers: redirects the user to the Tips and Tricks about flowers;
- vegetables: redirects the user to the Tips and Tricks about vegetables;
- soil: redirects the user to the Tips and Tricks about soil;
- q&a: redirects the user to the Frequent Questions and Answers page;
- contact us button: redirects the user to the Contact page.

Login pop-up:

- remember me: stores the credentials so that the user won't have to re-enter them the next time he visits;
- login: finalizes the login action, logging the user if the credentials are correct and then the user can have access to his profile and his progress will be saved;
- create account: redirects to a sign up page;

SignUp page:

- create account: creates the user account if the information entered is valid and then redirects to the home page.

Forgot password page:

- change password: changes the user's password if the information entered is valid and then redirects to the home page.

Beginner page:

- Module x: redirects to Module x page.

Intermediate page:

- Module x: redirects to Module x page.

Advanced page:

- Module x: redirects to Module x page.

My profile page:

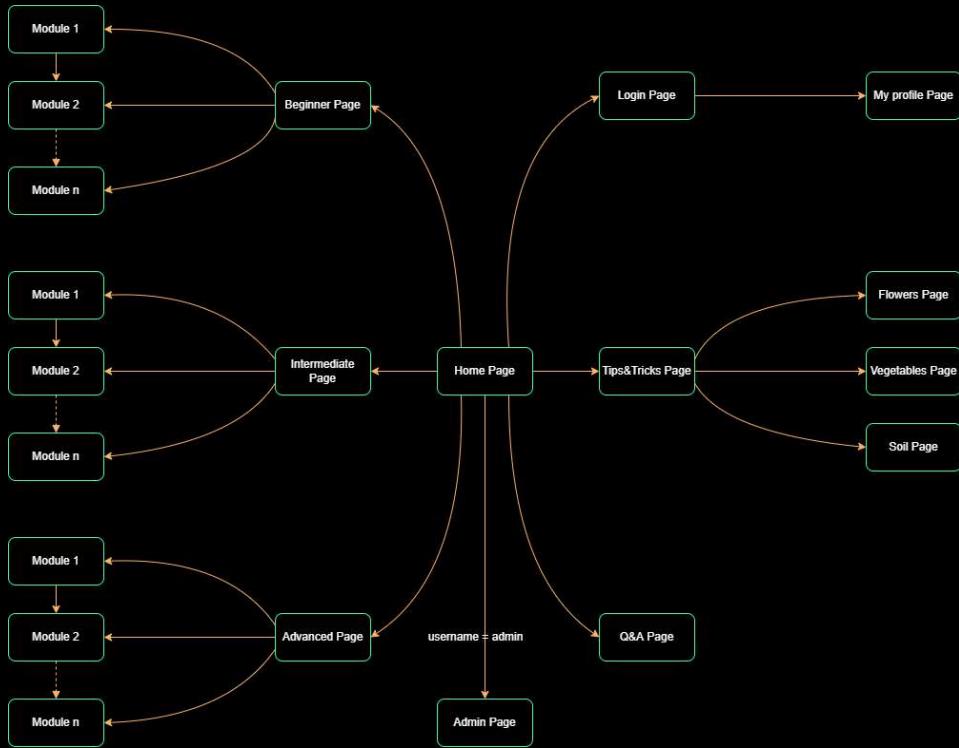
- check task: adds a new task to the "done" state;

Q&A page:

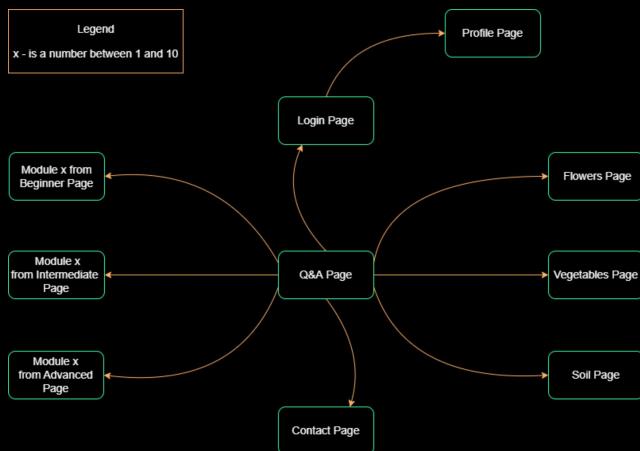
- form: redirects the user to a form where he can address his question;
- read more: redirects the user to a module relevant for his question.

## **2.2.1 How to use the product**

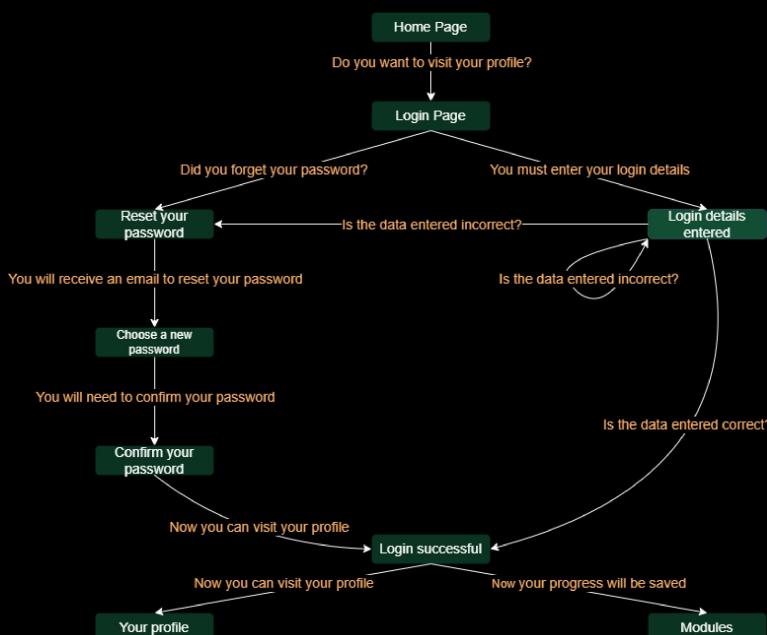
- Home page data flow.



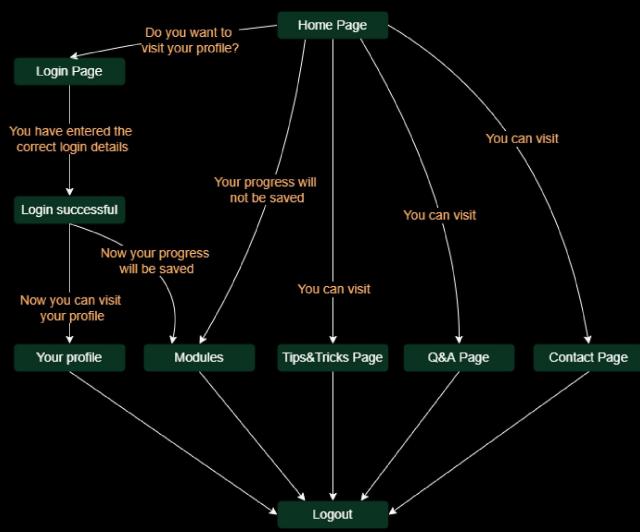
- Other pages data flow (in this example the Q&A page).



- Login data flow.



- Logout data flow.



## 2.3 User Classes and Characteristics

- Guest: simple viewer of the website;
- User: user with an associated account that can have a profile and can see his progress.
- Admin: the administrator of the website who can modify the courses, plants and can answer questions.

## 2.4 Operating Environment

The developed product can be used on any device with a connection to the Internet and a browser installed.

## 2.5 Design and Implementation Constraints

e-Gardening uses html, css and javascript for its visualization engine and when it comes to backend part, it is written in Node.js. The information about users, courses and plants are being kept into the MongoDB database. It also uses libraries such as "nexmo" to send SMS to its users, RSS for the rss feed. As per the code formatting, we used MVC.

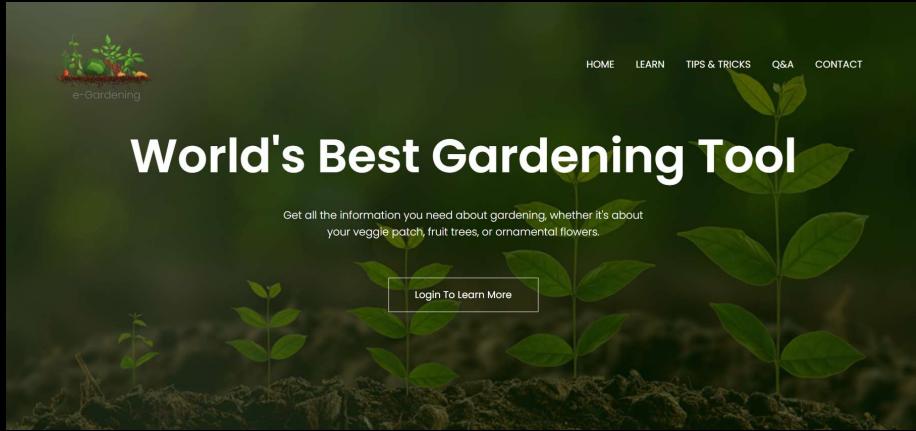
## 2.6 Security

e-Gardening uses bcrypt library to encrypt its users passwords and generates new sessions for each new client. Moreover, it doesn't fetch unnecessary information and it doesn't fetch users passwords or confidential data.

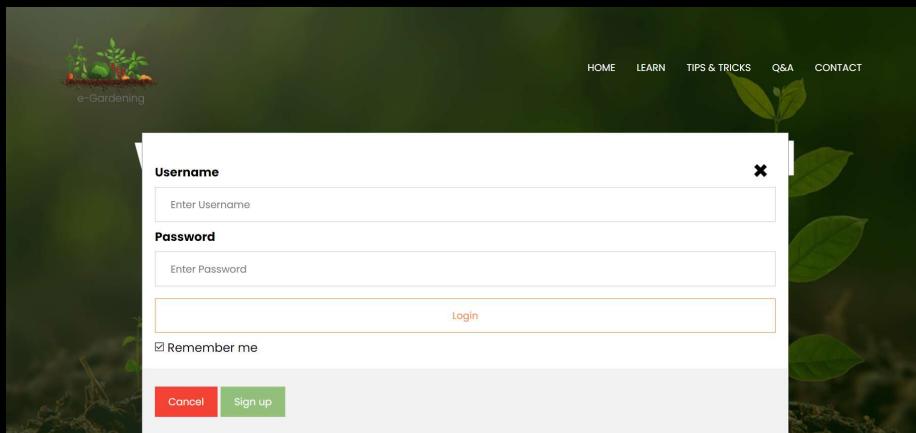
# 3. External Interface Requirements

## 3.1 User Interfaces

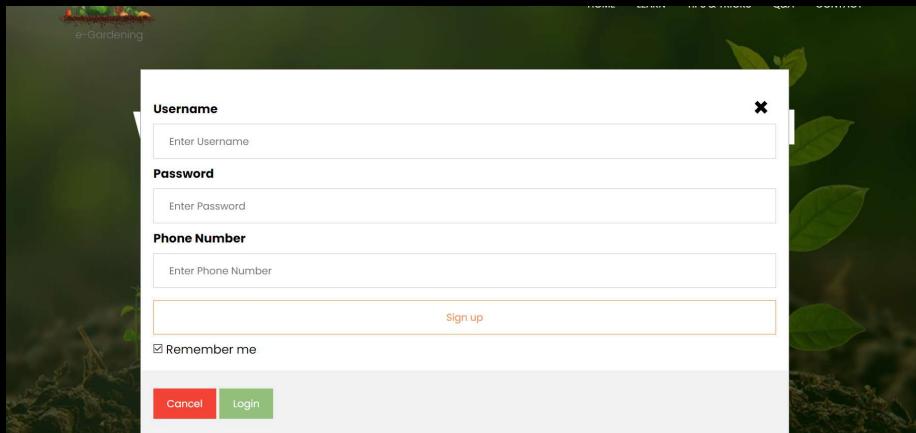
e-Gardening's Home page



e-Gardening's Login pop-up



e-Gardening's Sign-up pop-up



e-Gardening's Beginner page

**Beginner**

## Organic Garden

Are you thinking of starting a garden, but doing it the old fashioned way with no pesticides? Organic Gardening can be an extremely fun experience, but there are some specific steps you'll want to take before getting started.

Garden Basics  
75%

Growing Zone  
22%

Garden Beds  
0%

e-Gardening's Garden Basics page

The e-Gardening website features a dark green header with a small logo on the left and a navigation menu with links to HOME, LEARN, BEGINNER, TIPS & TRICKS, Q&A, and CONTACT. The main content area has a dark green background with a large image of leafy greens at the top. Below the image, the title "Garden Basics" is centered. On the left side of the content area, the text "What is Organic Gardening?" is displayed next to a small image of green plants.

e-Gardening's Growing Zone page

The e-Gardening website features a white header with a dark green navigation bar containing links to HOME, LEARN, BEGINNER, TIPS & TRICKS, Q&A, and CONTACT. The main content area has a white background. A section titled "Microclimates" contains text about how microclimates affect garden zones. Below this, a section titled "Tasks:" lists three items: "Make sure you find your zone!", "Make sure you know where you can put your garden!", and "Find out what grows best in your area". To the right of the text, there is a photograph of a garden bed with various leafy green plants growing in rows.

e-Gardening's Garden Beds page

The header features a green background with a collage of various plants and foliage. At the top left is the e-Gardening logo, which includes a small illustration of a garden scene. The top right contains a navigation menu with links: HOME, LEARN, BEGINNER, TIPS & TRICKS, Q&A, and CONTACT.

## Garden Beds

### Choosing Your Garden Beds

### Raised Beds

Raised beds are typically the best option for small-scale urban and suburban gardeners. They **don't require super complicated construction** and are great for those who don't have a lot of space or want to grow specific plants.

## e-Gardening's Tips&Tricks Flowers page

### Flowers tips & tricks

Starting a flower garden can be somewhat of a challenge, but there are several **good flower gardening tips and tricks** you can follow to make the process easier. Follow our beginner gardening tips and watch your beautiful garden bloom.

### Choose a Sunny Location

First, be sure the area you choose for your flower garden will get the proper amount of sunlight. Most flowers need plenty of natural light, so watch the area you're thinking about for a few days to determine whether or not it receives enough sun throughout the day. If it does, it will be a prime spot for growing flowers. If not, you may want to consider relocating the garden to another location.

## e-Gardening's Q&A page

### Q&A

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If you have any questions, please don't hesitate to ask them ahead at this [form](#).

**Samantha Williams**

Q: What does "Organic Gardening" mean?

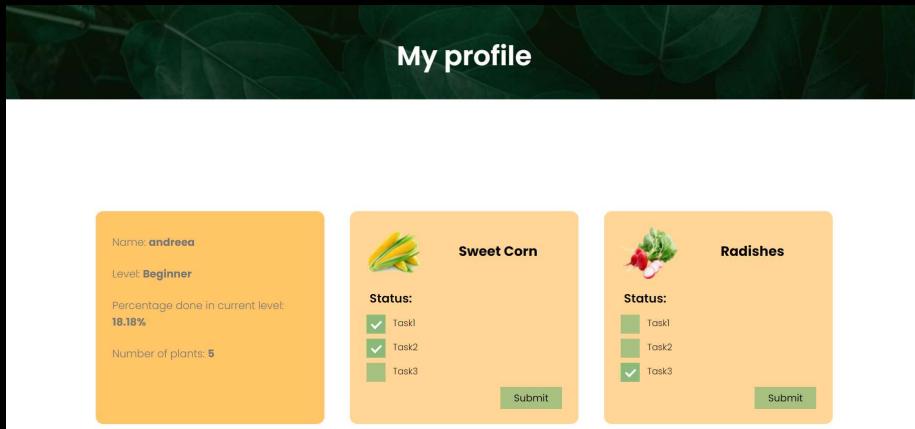
A: Organic gardening is all about growing plants in tune with Nature.[\[read more\]](#)

**Adrianna Lowry**

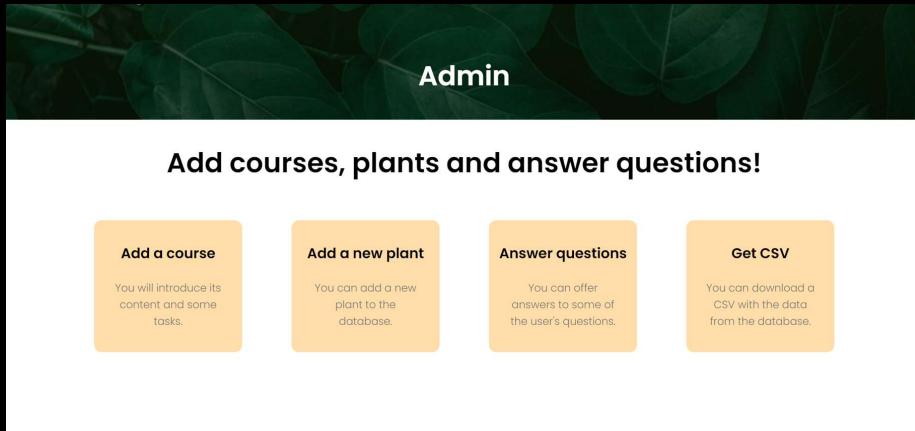
Q: What tools do I need to start an organic garden?

A: There are a number of different tools that are important for every organic gardener to have such as: a wheelbarrow, a rake, a

## e-Gardening's My profile page



e-Gardening's Admin page



## 3.2 Software Interfaces

The minimum software requirements of e-Gardening are a working browser and connection to the Internet.

## 3.3 Communications Interfaces

e-Gardening requires Internet connection. The communication standard that is to be used is HTTP.

## 4. System Features

### 4.1 Home page

Guests and users can read about our courses, tips and tricks, questions and answers and they can address questions as soon as they log in.

### 4.2 Login pop-up

Users of the app can login by entering their credentials and therefore access other functionalities of the app.

### 4.3 SignUp page

Guests can create an account and then use it to log in into the application and access all the features provided by the website.

### 4.4 Beginner page

Guests can view the modules available and the users can also see their progress.

#### **4.5 Intermediate page**

Guests can view the modules available and the users can also see their progress.

#### **4.6 Advanced page**

Guests can view the modules available and the users can also see their progress.

#### **4.7 Garden Basics page**

Guests and users can view the information about an organic garden.

#### **4.8 Growing Zone page**

Guests and users can view the information about where to place your garden.

#### **4.9 Garden Beds page**

Guests and users can view the information about how to make different garden beds.

#### **4.10 Flowers page**

Guests and users can view some tips and tricks regarding the flowers.

#### **4.11 Vegetables page**

Guests and users can view some tips and tricks regarding the vegetables.

#### **4.11 Soil page**

Guests and users can view some tips and tricks regarding the soil.

#### **4.12 Q&A page**

Guests and users can view the frequent asked questions and answers and can also address their own questions.

#### **4.13 My profile page**

Users can view their progress, their plants status and can add new available plants to their virtual garden.

#### **4.14 Admin page**

The website administrator can post a new course, plant or can answer some questions from the website, addressed by the users.

### **5. Other Nonfunctional Requirements**

#### **5.1 Safety Requirements**

To ensure that no one of e-Gardening's users loses any data while using the application.

#### **5.2 Security Requirements**

e-Gardening doesn't have any security requirements and thus any type of user can use it without any additional privileges.

### 5.3 Software Quality Attributes

- Adaptability
- Availability
- Maintanability
- Portability
- Reusability

## Contribution

### Carausu Madalina:

- Website design implementation
- Home page
- Q&A page
- Semantics and metadata
- Documentation
- Admin page
- Dynamic courses, plants and answers
- Dynamic questions
- Flux de date RSS
- REST API

### Haiura Isabela:

- Website design implementation
- Beginner page
- Garden Basics page
- Growing Zone page
- Garden Beds page
- Login pop-up
- Documentation
- Login/Sign-up
- ajax
- Data export: csv
- MVC
- My profile with dynamic data