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# 1. Purpose

## Intended Audience

This SRS document describes the System Requirements and Software Design for an Automated Gardening System, and the target audience are System and Software Engineers working on the development of this project.

## Intended Use

The SRS defines the overall System Architecture and Requirements as well as the Software. Architecture and Design. This document also contains the definition of the System. Requirements which shall be used as the input for System Test cases and Software Unit Test cases.

## Scope

## Definitions and Acronyms

|  |  |
| --- | --- |
| **Acronym** | **Description** |
| LED | Light Emitting Diode |
| EC | Electrical Conductivity |
| PH | Potential of Hydrogen |
| AT | Ambient Temperature |
| UV | Ultraviolet |
| SW | Software |
| HW | Hardware |

# 2. Overall System Description

## 2.1. Use Case Diagram

A diagram of a device

Description automatically generated

Raspberry Pi 4 Model B Board

## System Architecture

AT Sensor

Servo Motor

PH Sensor

A raspberry logo with green leaves

Description automatically generated

LED

EC Sensor

Humidity Sensor

Exhaust Fan

(DC Motor)

## Function Requirements

* + 1. Monitor Key Parameters
    2. Control UV Light Source
    3. Control DC Motor (Fan element)
    4. Control Servo Motor (pump nutrient solution)
  1. Non-Function Requirements
     1. Requirement (1)

1. Software Architecture
   * 1. Static Software Architecture