

## Documentation

*Team name*

*Date*

### **Important Notes:**

- *The descriptions in italics in this document (except for some section headings) are exemplary and explanatory and must be removed from the completed report.*
- *Identify which section of this report was created by which team member*
- *Your documentation should have ca. 8 pages.*

## Team members

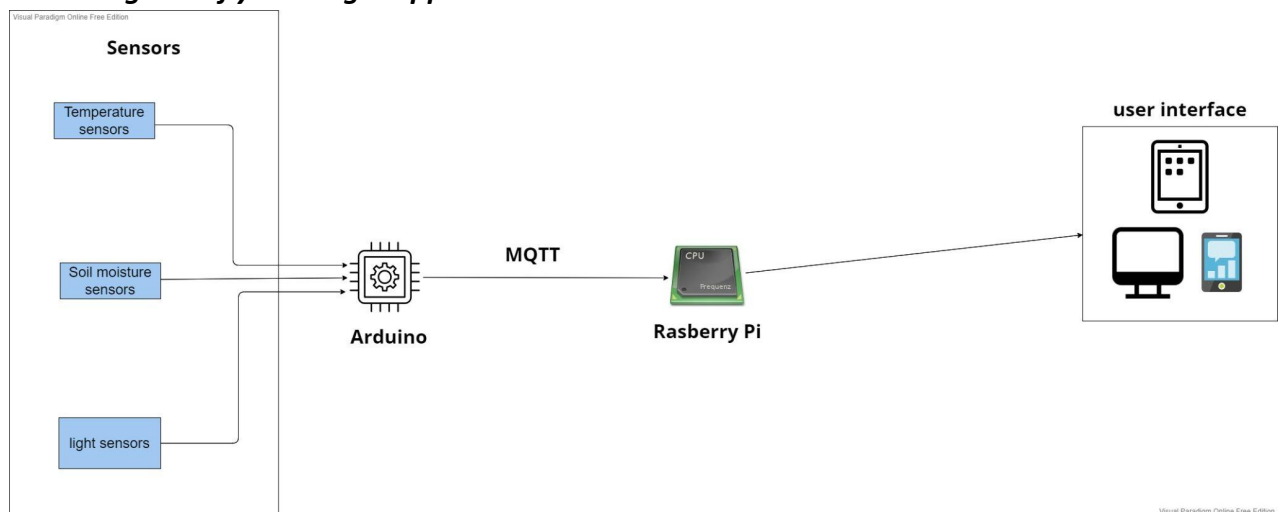
1. Jires voufo Donfack
2. Armit Chakma
3. Evrard Leuteu
4. Aditya Kumar

## Introduction

What are “Internet of Things” and “Wireless Sensors Network” in your project domain?

## Concept description

**Block diagram of your target application.- Amit**



### **What is the main application for your prototype? - Aditya**

A Greenhouse is constructed and used to grow a variety of plants such as vegetables, fruits and flowers. They serve as a controlled and protected environment to grow healthier plants. Our prototype helps to make the process of using and maintaining these greenhouses with ease and efficiency by creating an IOT application around it. In our prototype, we will be using sensors to collect data such as soil moisture, temperature and light and use them to make decisions to perform activities such as irrigation and ventilation in the greenhouse. All this could be monitored using an application that would be accessible through smartphones, computers etc.

Team Name

***Which devices, sensors, actuators, apps etc. are using for your application?***

In this project we will be using the following Hardware and Software:

Control Unit

Arduino Uno Wi-Fi(R2) to collect data coming from the sensors

Raspberry Pi 3 takes data collected by Arduino and sends it via Wi-Fi to the internet

A Smartphone to monitor the data from the internet

2. Sensors

Temperature and Humidity combine to measure those two parameters from the environment

Moisture sensor to measure the level of moisturization of the soil

3. Actuator

A 3.6 V motor to pump water and irrigate the soil

4. Software

Arduino IDE to program the Arduino

Raspbian to program the Raspberry Pi

**Project/Team management**

*Which project methods do you use in your project?*

*Breakdown: How do you manage your tasks?*

*What are the different tasks/roles of the team members in the project?*

*Describe which team member did which tasks.*

We distributed the task evenly among team members and we will be using the agile method for project management and would follow the double diamond approach for this project

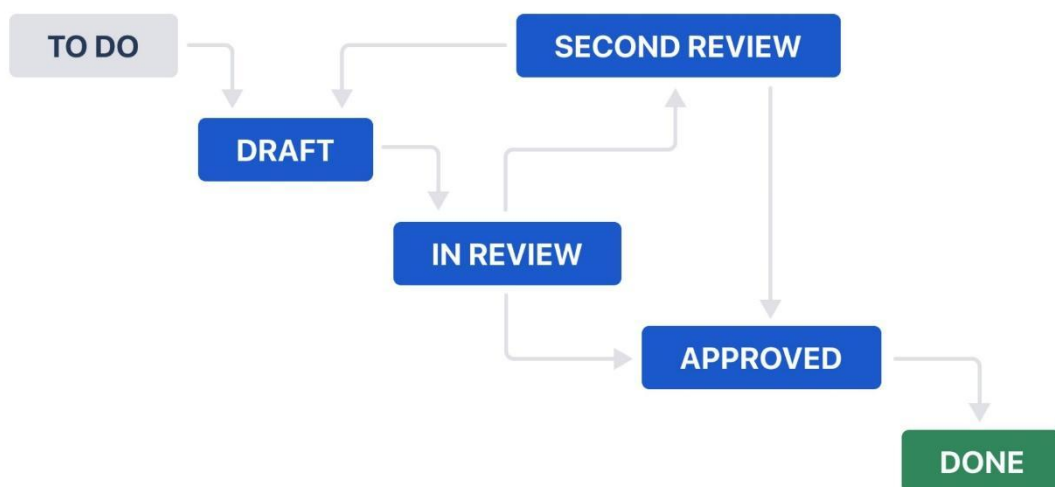


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## **Technologies**

*Describe the technological approaches you will use to implement your project.*

*Sensor technologies*

*Communication protocols*

*programming languages*

*...*

## **Implementation**

*Describe the static structure of the environment.*

*Provide a class diagram for this purpose and briefly explain the classes or modules.*

*Describe the use case(s) of your environment*

## **Use Case**

*Give instructions on how to use your application. Potentially using an/more example(s), figures, screenshots etc.*

## **Sources/References**

*Provide the sources on the technologies and algorithms you used in your project (Github).*