

# Project Design Phase-I

## Solution Architecture

Date	15 October 2022
Team ID	PNT2022TMID27109
Project Name	Smart Farming - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

### **Solution Architecture:**

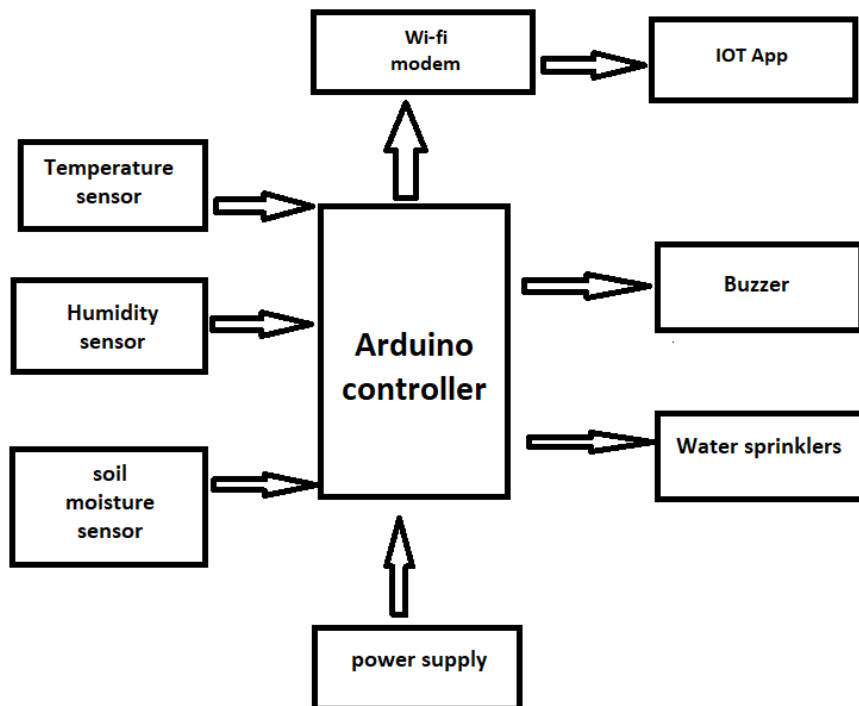
Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behaviour, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed and delivered.

### **The key features of solution architecture are :**

- Analyzing the technology environment.
- Analyzing enterprise specifics.
- Analyzing and documenting requirements.
- Setting the collaboration framework.
- Participating in technology selection

## BLOCK DIAGRAM



- **Arduino uno:** is an open-source software program that allows users to write and upload code within a real-time work environment and upload it to the board. As this code will thereafter be stored within the cloud
- **Soil moisture:** through the soil moisture meters (portable or fixed) for monitoring moisture levels at various points within the field.
- **Temperature sensor:** It is very efficient in horticulture. It is user friendly to use. The most common type of temperature sensor is a thermometer, which is used to measure temperature of solids, liquids and gases.
- **Water Sprinkler:** irrigation is a method of applying irrigation water which is similar to natural rainfall. Water is distributed through a system of pipes usually by pumping. It is then sprayed into the air through sprinklers so that it breaks up into small water drops which fall to the ground.

- **Humidity sensor**: is a digital-output, relative humidity, and temperature sensor. It uses a capacitive humidity sensor and a thermistor to measure the surrounding air, and sends a digital signal on the data pin.
- **Buzzer**: uses the piezoelectric effect of the piezoelectric ceramics and uses the pulse current to drive the vibration of the metal plate to generate sound.

