Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID53631
Project Name	Project - SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To detect the moisture levels in the soil and automatically give appropriate water supply to the fields without the intervention of the farmer.
2.	Idea / Solution description	The project presents the use of soil moisture sensors which helps to ease out the difficulty to monitor and keep record about the changes in soil moisture. Using the NodeMcu with a moisture sensor, temperature and humidity sensor, soil condition is measured and analyzed. The sensors provide information related to the moisture status of the soil. The NodeMcu will collect and process the data received from the Sensors and send it to the IBM Cloud platform. When a threshold moisture level of the soil is reached, the water will supply accordingly. This is essential because water must be provided to the plant at a particular time for a good yield. This project is highly useful for farmers, Nursery professionals by eradicating traditional or manual methods of irrigation systems.
3.	Novelty / Uniqueness	1. If there is any requirement of water supply our system not only pumps the water but also prior to that it checks the availability of water in tanks in order to prevent water shortage. 2. The farmer can also control the pump so that during situations such as rain the pumps do not supply surplus water which would lead to water logging
4.	Social Impact / Customer Satisfaction	1. The cost of loss of the crops because of both rotting up and drying of crops is prevented and this saves a lot of money for the farmers whose main source of income is from agriculture. 2. Around 54.6% of population in India does farming and out of which majority are small scale farmers and this system will majorly prevent their losses and be helpful to them

5.	Business Model (Revenue Model)	B2B - The product can be sold to the agriculture based companies who are pioneers in agricultural based products. B2C - The system can be sold directly to the consumers as a stand alone product.
6.	Scalability of the Solution	The sensors, microcontrollers and various other components used as a part of this system is cost effective hence this product is scalable.