# Shri Vishnu Engineering College for Women (A):: Bhimavaram

## Institution's Innovation Council

### Project Expo: March- 2020

**Team Name: PINGS WITH THINGS**

**Problem Statement title: Solar Powered Smart Irrigation System from agriculture and rural development.**

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**Problem Statement title:** **Solar Powered Smart Irrigation System from agriculture and rural development.**

## Abstract (Max 300 words)

# Problem statement:

Cost effective solar power can be the answer for all our energy needs. Solar powered smart irrigation systems are the answer to the Indian farmers who generally face the problem of frequent power cut or non-availability of grid supply. This system consists of solar powered water pump along with an automatic water flow control using a moisture sensor. It is the proposed solution for the present energy crisis for the Indian farmers. This system conserves electricity by reducing the usage of grid power and conserves water by reducing water losses.

## IMPLEMENTATION:

- This System without using electricity we are developing our project by solar panel and implementing it.
- We are also sending the soil moisture data by using blynk app and by using WiFi network and we also controlling the different soils by using soil moisture sensor.
- We used here relay motor to control water pump module that is when led in relay motor is on then soil moisture will activate and water pump module will pump water to make dry soil wet automatically.
- In case of fire if the crop is burnt then MQ2 sensor gets activated and notification will send to the farmer and the buzzer will automatically produce sound.

# Block Diagram

## Components

- Node MCU
- Soil Moisture Sensor
- Relay Module
- Water Pump Module
- Jumper Wires
- MQ2 Gas Sensor
- Battery
- Bread Board
- Buzzer

## Future Scope

- By using nitrogen gas, phosphorous gas, potassium gas sensors. We will check the availability of these gases in the soil in case of lack of these gases automatically it sends notification to farmer and also buzzer sound rings until the required gases are supplied.
- Notification to farmers when the water level is low and then water is also supplied.