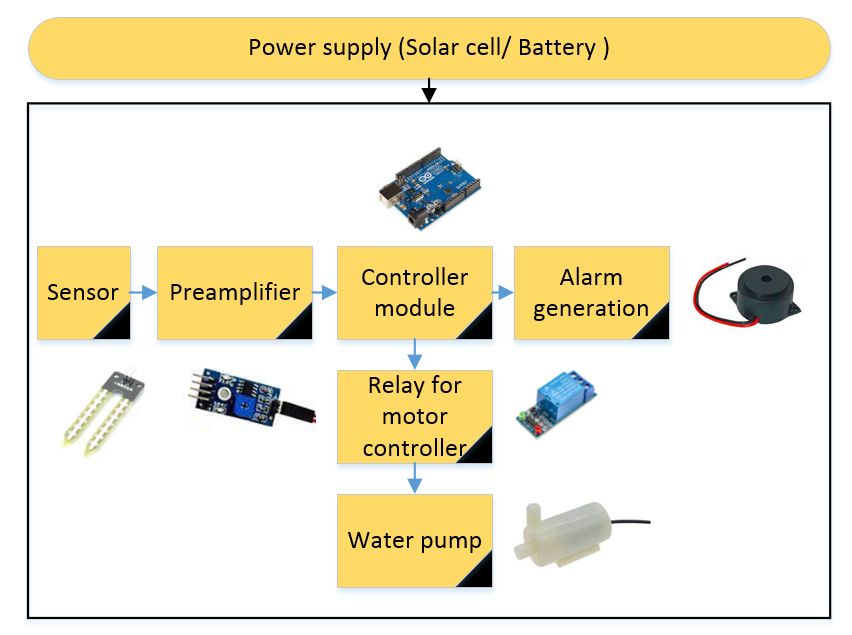
Title :

Description:

Block diagram:



**Controller module:**

It uses Arduino UNO as a controller which controls complete system. Takes digital signal from preamplifier set the alarm and provides signal to the relay to switch on the water pump.

**Sensor:**

As a sensor, **moisture sensor** has been used. It detects the moisture of the in the soil and changes its resistance value based on the level of the moisture in the soil.

**Preamplifier:**

Preamplifier sets a specific threshold and convert it to digital signal whether the soil in dry or wet. This signal sent to the Arduino module to take specific actions.

**Relay module:**

Relay module is a device that works here as a **signal controlled switch**. While the controller module (Arduino UNO) sends the signal to the relay module it closes/ open circuit to the **switch on/ off** the motor.

**Water pump:**

Water pump pumps the water to the desired location.

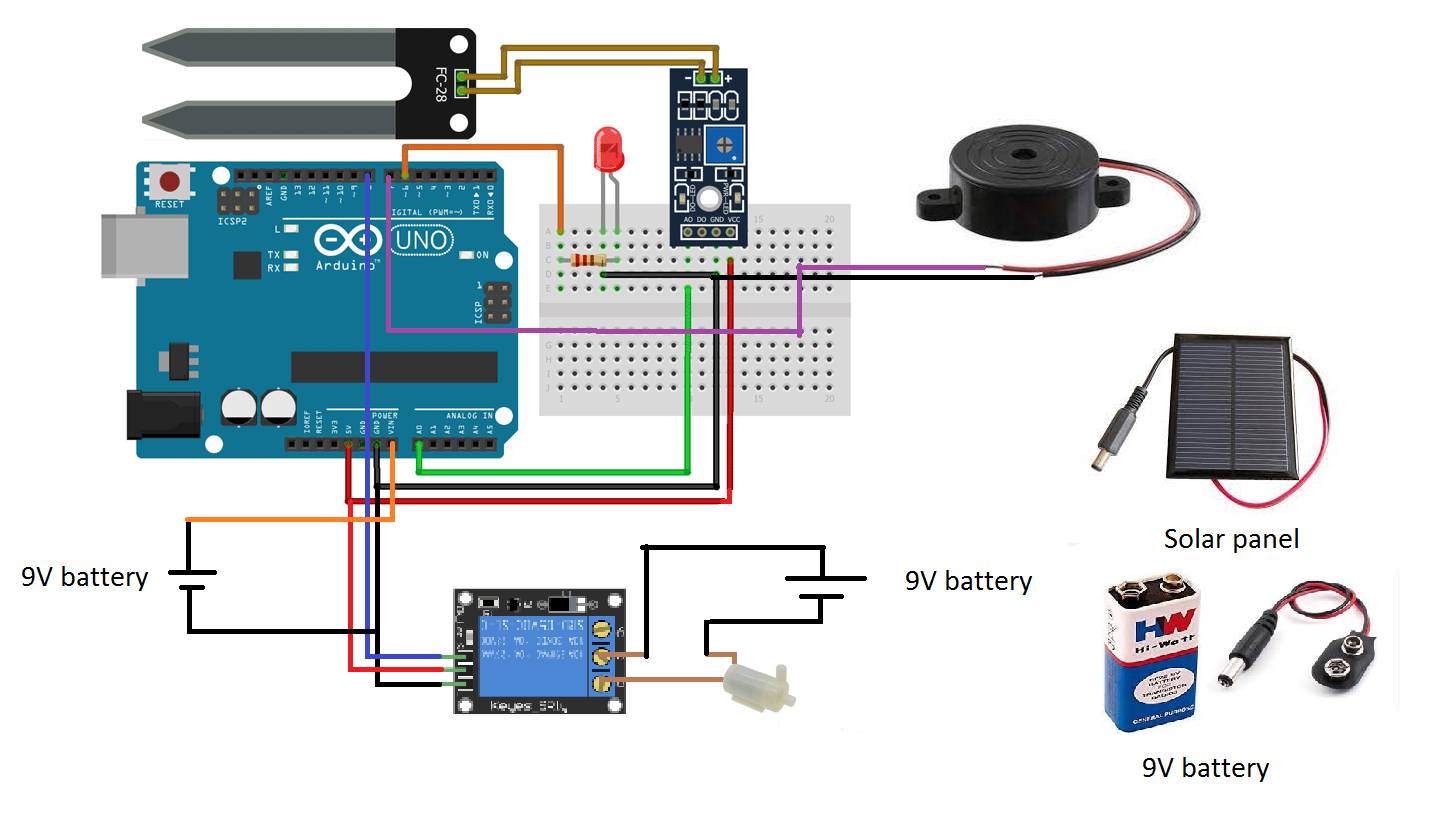
**Alarm generation:**

This device is used to generate an alert while water is required for the plant.

**Power supply:**

We can use a battery to powered up the device. However, we can also use a solar panel to powered up the device. Using solar panel, we can generate renewable energy which can also save the environment.

**Circuit diagram:**

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**Code:**

We use **Arduino IDE** software to code the **Arduino UNO** microcontroller.