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The current situation for farmers in India is a heart wrenching story. The very people who feed the nation are faced with starvation, and even a killer shortage of water.

So as the engineers of India we consider it as our responsibility to contribute for solving these problems by providing a technological solution. So here's our idea about managing the water supplied to the crops by means of drip irrigation.

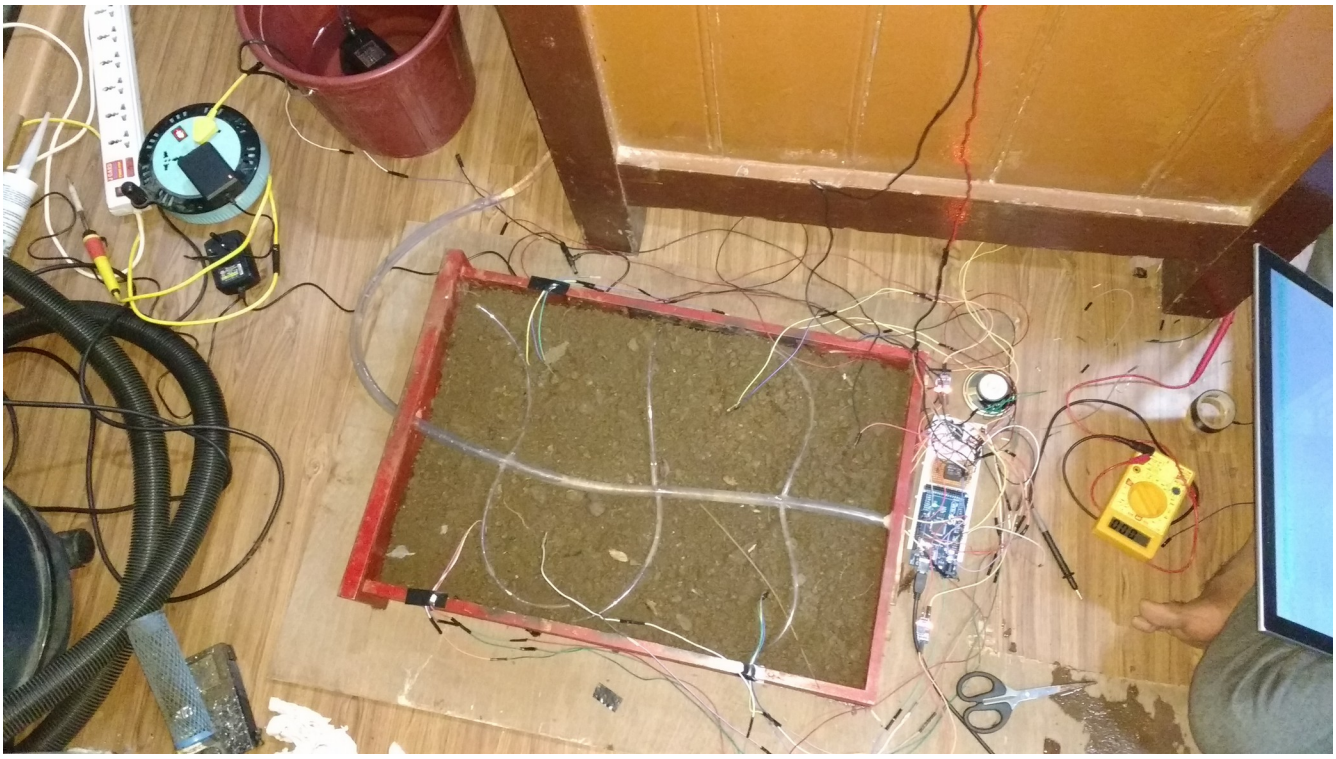
Considering our system the parameters for the input to our system are – present **soil moisture**, **temperature** of the soil, the **crop** which is being cultivated, the **plant growth stage** and the **type of soil**.

Out of these the crop selection, the plant growth stage and soil type will be decided by the farmer. A user friendly GUI will be provided to the farmer for selecting these parameters.

For **detecting the moisture** we have used a sensor which on calculating resistance measures the conductivity of the soil and relates it with the **water content**. For detecting the temperature of the soil we have used the readily available temperature sensor **LM35**.

After having our input , the Arduino **microcontroller** does its job by giving output after considering all the factors. The output of the microcontroller decides the **time for which the water pump will run** which in turn imply that we have controlled the water supply to the crops.

Our Complete Set Up



MicroController Circuit