

Project Statement

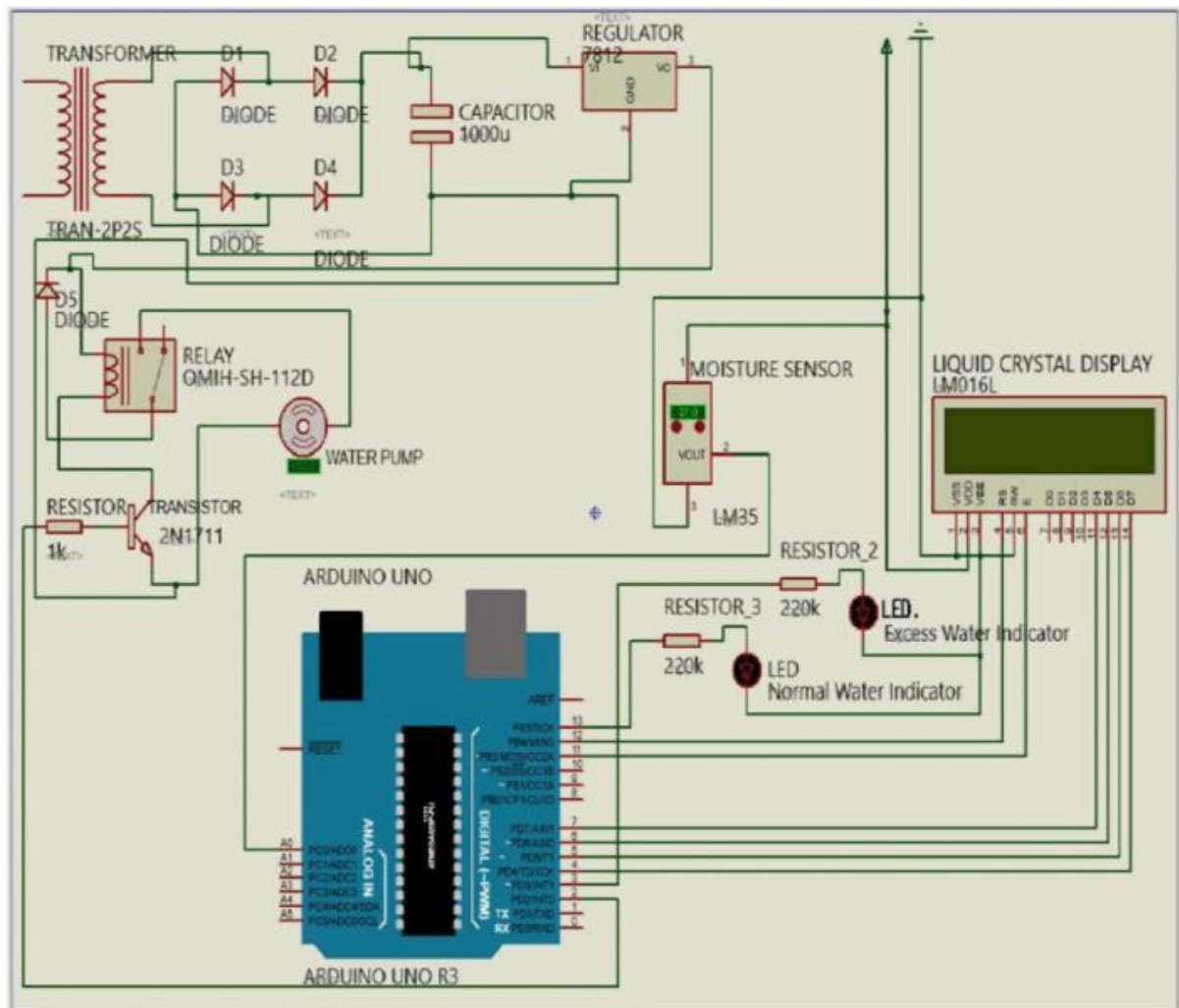
In the case of traditional irrigation system water saving is not considered. Since, the water is irrigated directly in the land, plants under go high stress from variation in soil moisture, therefore plant appearance is reduced. The absence of automatic controlling of the system result in improper water control system. The major reason for these limitations is the growth of population which is increasing at a faster rate.

At present there is emerging global water crisis where managing scarcity of water has become a serious job. This growth can be seen in countries which have shortage of water resources and are economically poor. So this is the serious problem in agriculture area. So we want to design an Smart Irrigation System which is using arduino microcontroller that operate automatically by sensing the moisture content of the soil and turn ON/OFF the pump using relay without the intervention of farmer and hence save water.

Component Required

- Breadboard
- Connecting cable
- Jumper Wire
- Arduino
- Nodemcu (esp8266)
- Nodemcu cable
- Soil moisture sensor

SCHEMATICS



Code

```
#define BLYNK_PRINT Serial
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
BlynkTimer timer;
char auth[] = "WBmCc9gwFYk9-ygihh9yWqwf9aXo3F4l";
char ssid[] = "DESKTOP";
char pass[] = "asdfghjkl";
int flag=0;

void notifyOnFire()
{
  int isButtonPressed = digitalRead(D1);
  if (isButtonPressed==1 && flag==0) {
    Serial.println("needs water, send notification");
    Blynk.notify("Water your plants");
    flag=1;
  }
  else if (isButtonPressed==0)
  {
    flag=0;
  }
}

void setup()
```

```
{  
Serial.begin(9600);  
Blynk.begin(auth, ssid, pass);  
pinMode(D1,INPUT_PULLUP);  
timer.setInterval(1000L,notifyOnFire);  
}
```

```
void loop()  
{  
Blynk.run();  
timer.run();  
}
```

Procedure of execution

Step 1

Setup Blynk app

Download Blynk app from the play store.

Step 2

Log in or create

an account in blynk

Step 3

Create new project

Name your project and select your board to nodemcu and Arduino

Step 4

click on plus sign to

Add notification button

Step 5

Click on the play button