



Unique Desk Weather Station Showpiece



by Mukesh_Sankhla

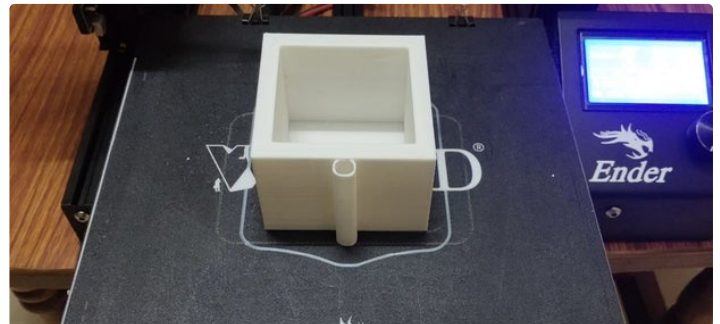
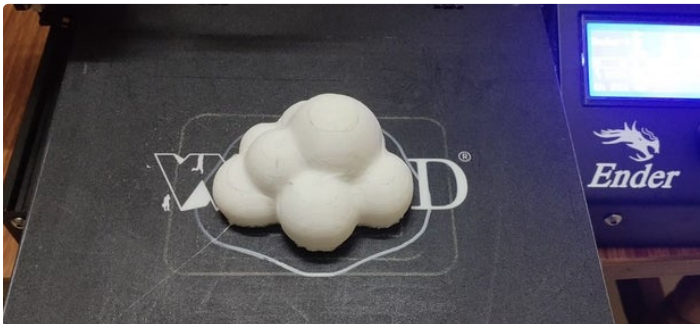
Hey Guys! For this months project I have made a weather station in the form of a Desk Plant or you can call it as a Desk Showpiece. This weather station fetches data into ESP8266 from a Website named openwethermap.org and changes the RGB colors in the showpiece. The showpiece got many different color combinations ,they changes according to Time

and Climate. For example if its raining outside at evening time then the color of cloud becomes combination of red,orange,yellow and it shows that thunderstorm effect .Like this it has many different color combinations.

<https://www.youtube.com/watch?v=SQTzGKAYG94&t>

Step 1: Required Components

- *Node MCU(ESP8266)
- *WS2812 LED Strip
- *5v Micro USB charger
- *3D printed parts





Step 2: Circuit Connection

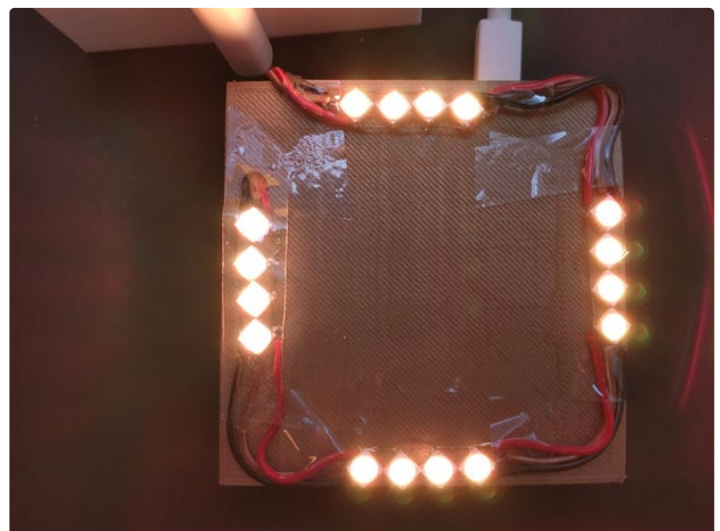
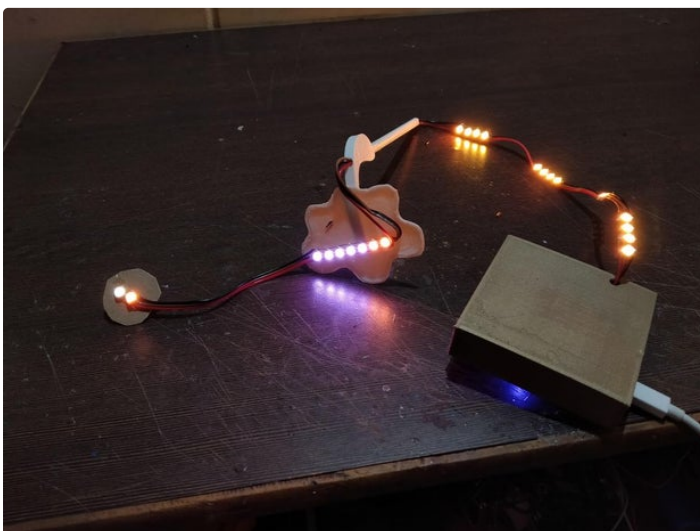
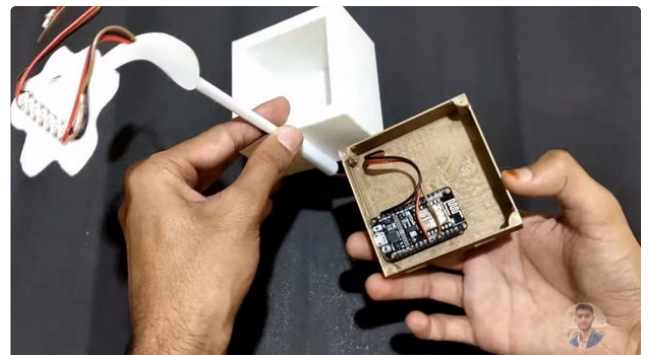
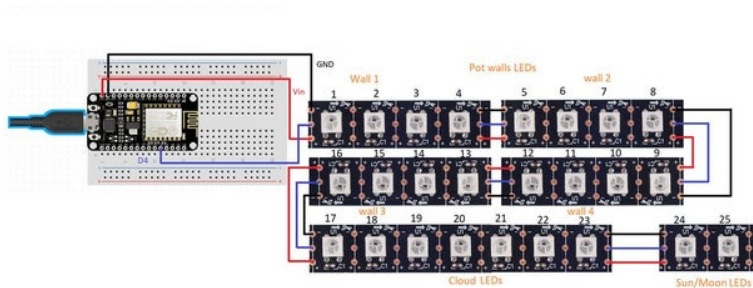
*Make the connections as shown in circuit diagram.

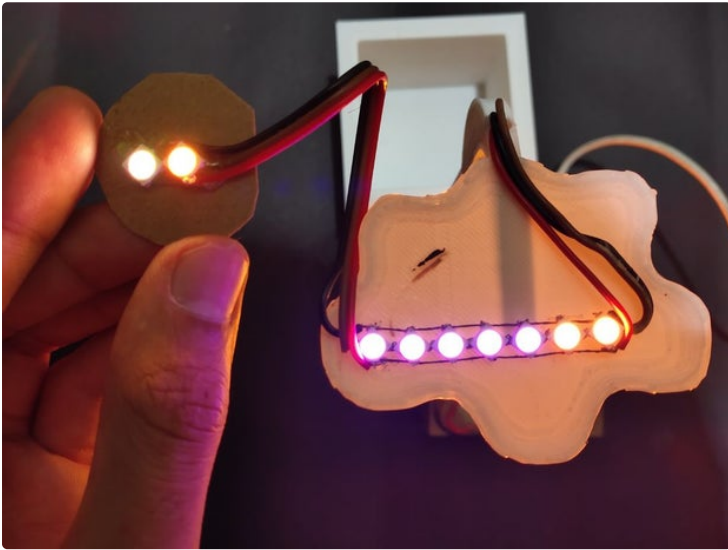
*You can use WS2812B LED Strip instead of individual LEDs.

*The Data pin is connected to pin D4 of ESP8266, GND to GND and 5v to Vin of the NodeMCU.

*Make sure that you use 4 LEDs for each wall (4 LEDs x 4 walls = 16 LEDs), 7 LEDs for cloud and 2 LEDs for Sun/Moon (3D printed Small Circle).

*The ESP8266 board is placed under the base, the base has a 3D printed cover to cover it.





Step 3: Planting

*Put a polythene cover into the pot.

*Put the Soil and plant into the box shaped pot.



Step 4: Coding

*Open the code given below in Arduino IDE.

*Code: https://drive.google.com/file/d/1MIS570K5I1ZHv9XbCG5qR2Kd_7NduyC/view?usp=sharing

*Make sure that you have included every library's that are mentioned in the code.

*Now you have to edit this

```
String OPEN_WEATHER_MAP_APP_ID = "App_ID";  
String OPEN_WEATHER_MAP_LOCATION_ID =  
"Location_ID";
```

*Open the browser and search for www.openweathermap.org.

Zone

```
int timezone = 5.5 * 3600;
```

As per India the Time Zone is 5:30 so I have typed 5.5 similarly you can type your Time Zone.

*Create a account and login into that website.

*Click on API keys copy the key and paste in the program at APP_ID.

*In the same website search your location open the result and copy the last number from URL and paste it at LOCATION_ID.

*The MAP_ID and LOCATION_ID will be similar to mine.

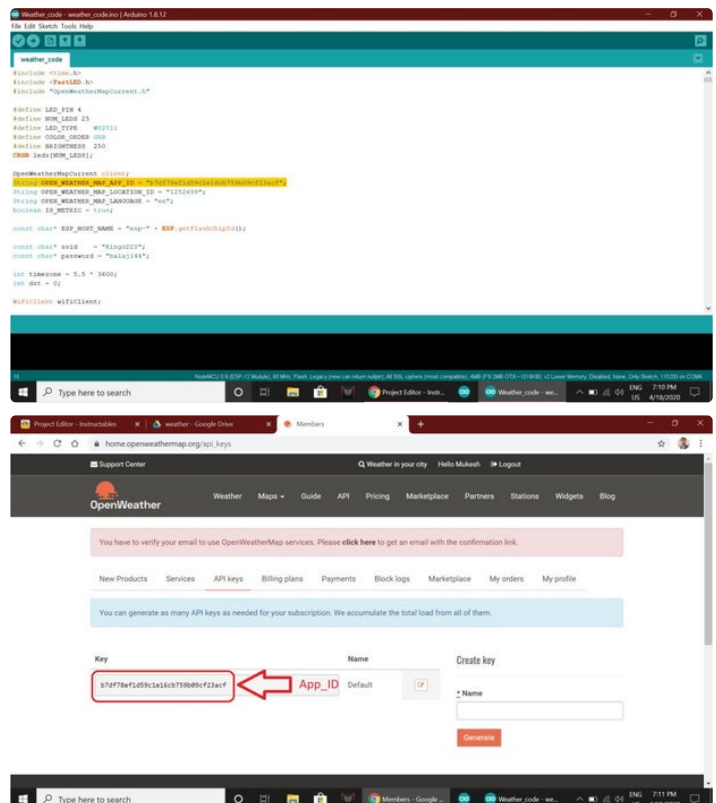
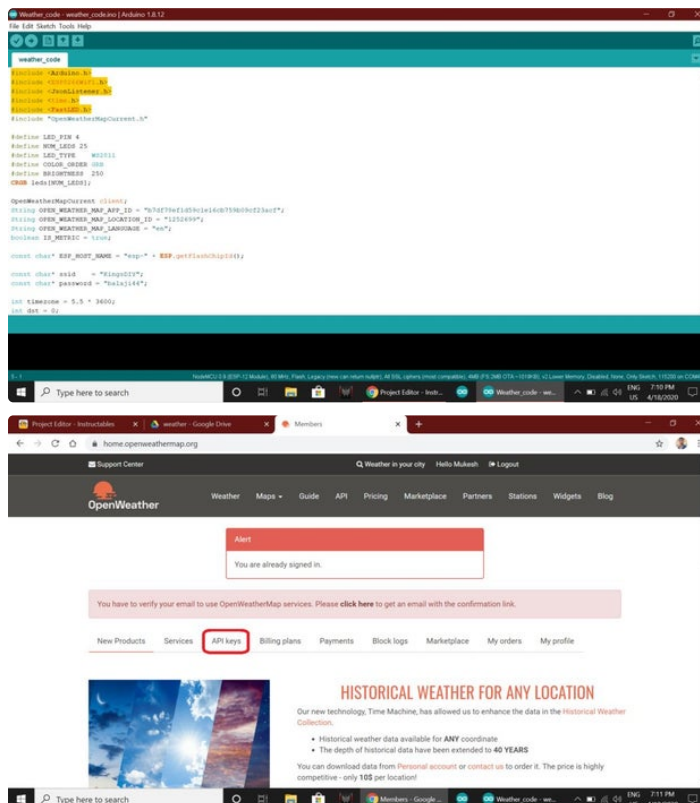
*Enter your Wifi_name at ssid and your Wifi password.

```
const char* ssid = "Wifi_name";  
const char* password = "password";
```

*Now change the Time zone as per your country Time

*All the under lines are to be edited by you as I have shown.

*Now connect the ESP8266 to your PC, select the port and upload the code.





<https://www.instructabl...>

Download



This is a great and unique gift idea



Thank you!