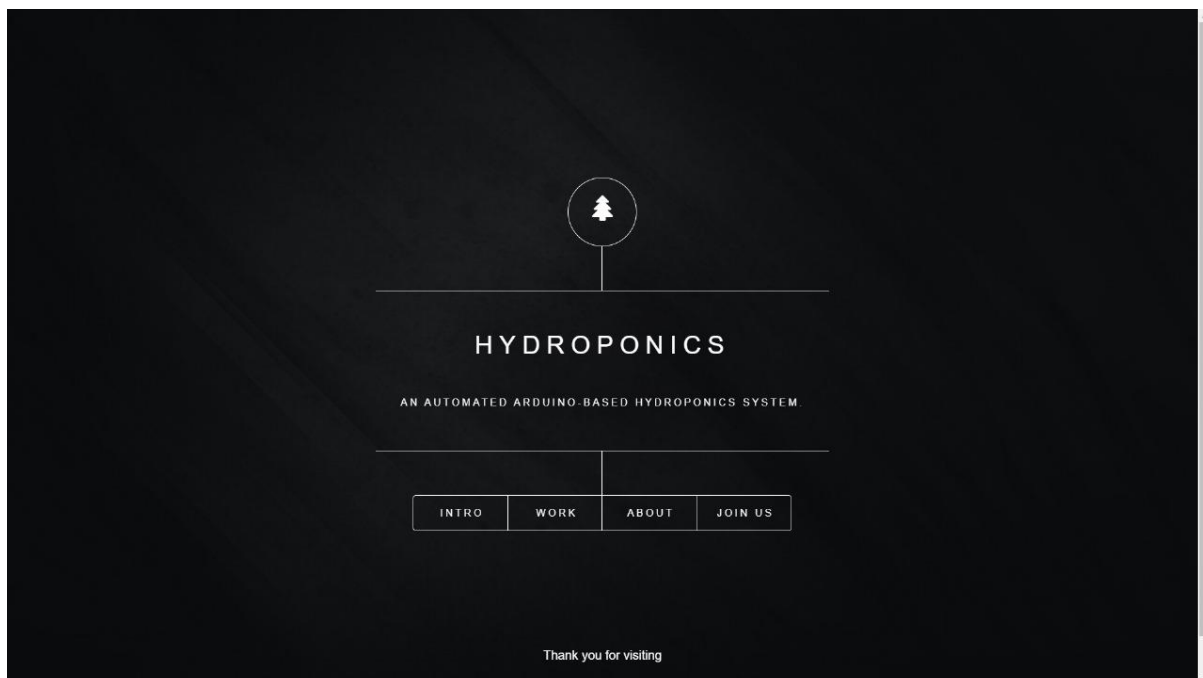


Arduino Outputs:

```
Water Level:64  
Temperature: 31.80  
Light ON  
7.41  
Water Level:70  
Temperature: 32.00  
Light ON  
7.41
```

```
Water Level:53  
Pump on  
Temperature: nan  
Light OFF  
7.44
```

Web Page Outputs:



INTRO



Hydroponics is a subset of hydroculture, the method of growing plants without



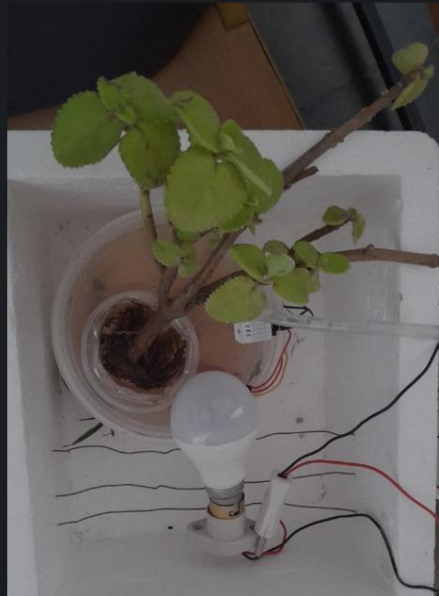
Hydroponics is a subset of hydroculture, the method of growing plants without soil, using mineral nutrient solutions in a water solvent. Terrestrial plants may be grown with only their roots exposed to the mineral solution, or the roots may be supported by an inert medium, such as perlite or gravel. The nutrients in hydroponics can come from an array of different sources; these can include but are not limited to byproduct from fish waste, duck manure, or commercial fertilisers.

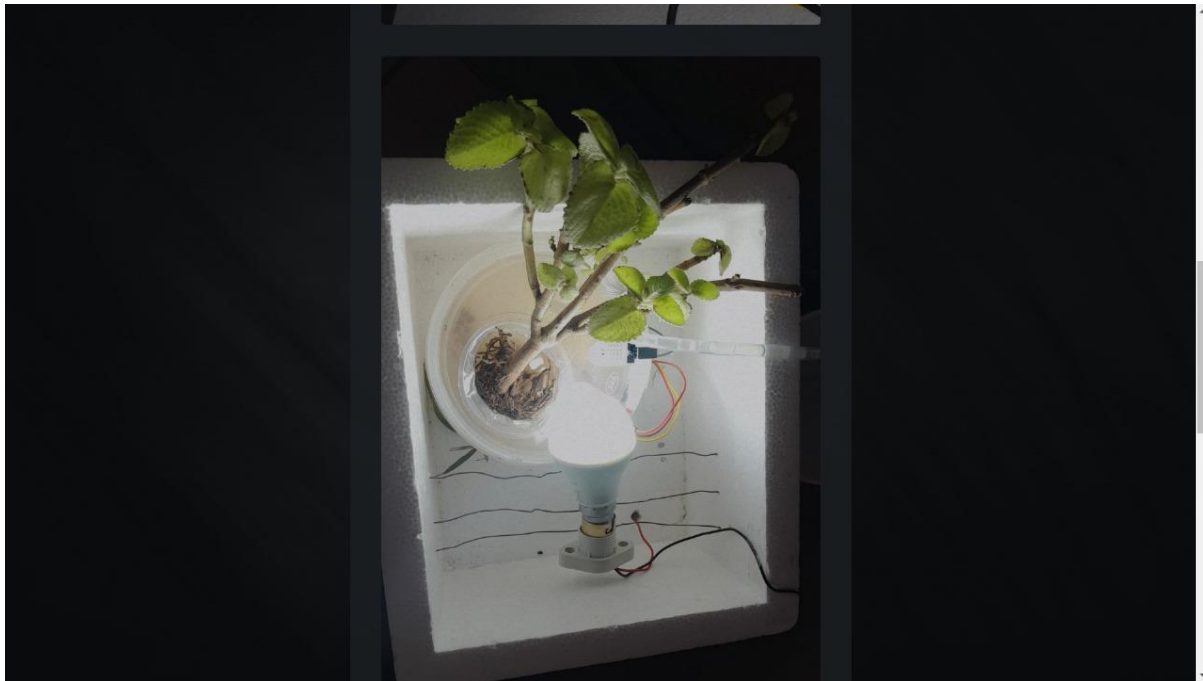
Growing with hydroponics comes with many advantages, the biggest of which is a greatly increased rate of growth in your plants. With a proper setup, your plants will mature up to 25% faster and produce up to 30% more than the same plants grown in soil.

Plants in a hydroponic system grow more quickly because they have food and water available to them all the time. They produce bigger crops because they can devote their energy to producing their crop rather than producing large roots such as would be needed in soil to seek out water and nutrients. Hydroponically-grown plants have smaller root systems because the roots do not need to go out looking for nutrients and water.

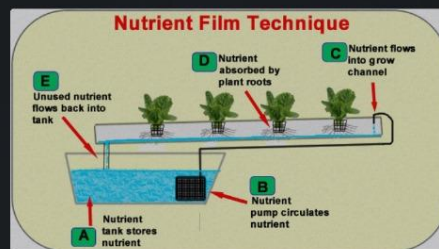
All of this is possible through careful control of the nutrient solution and pH levels. A hydroponic system will also use 70-90% less water than soil based plants because the system is enclosed, which results in less evaporation. Hydroponics is better for the environment because it reduces waste and pollution from soil runoff.

WORK





ABOUT



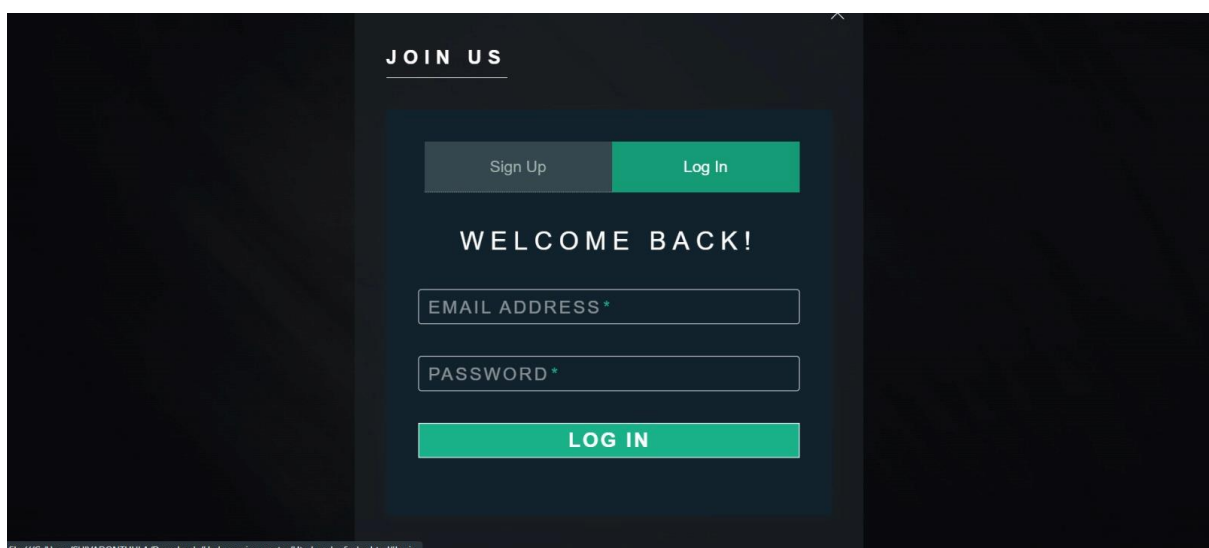
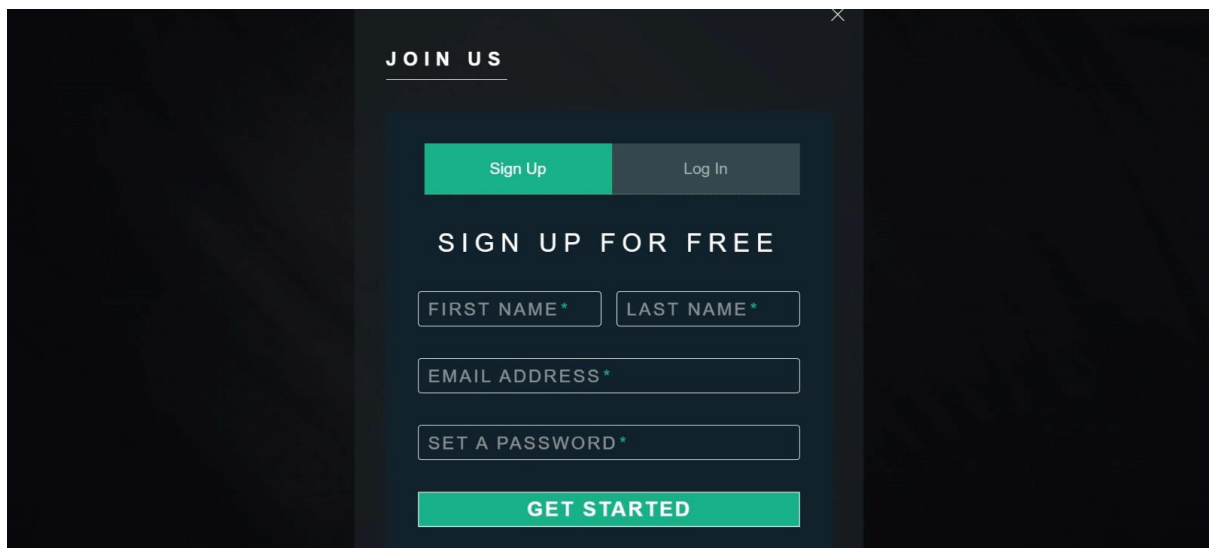
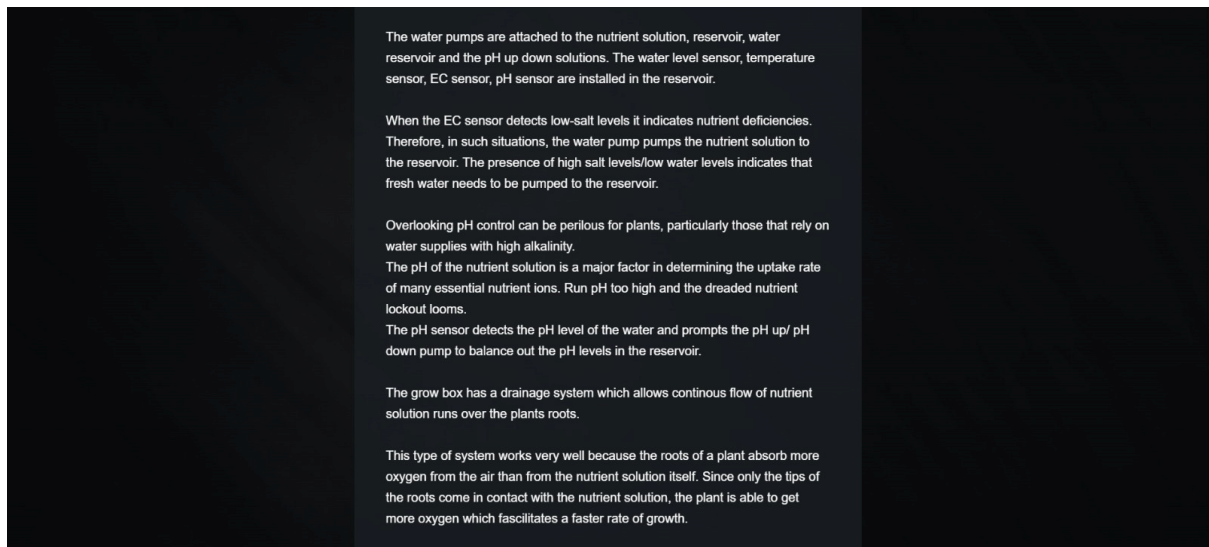
The entire system mainly consists of a grow box, a water reservoir, a water pump and few sensors.

The water pumps are attached to the nutrient solution, reservoir, water reservoir and the pH up down solutions. The water level sensor, temperature sensor, EC sensor, pH sensor are installed in the reservoir.

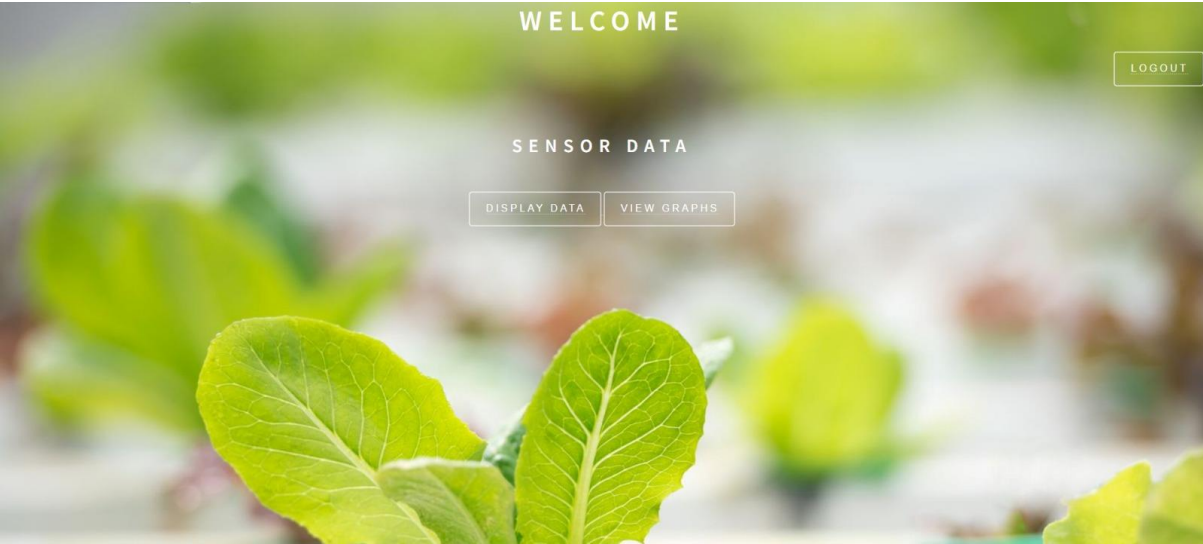
When the EC sensor detects low-salt levels it indicates nutrient deficiencies. Therefore, in such situations, the water pump pumps the nutrient solution to the reservoir. The presence of high salt levels/low water levels indicates that fresh water needs to be pumped to the reservoir.

Overlooking pH control can be perilous for plants, particularly those that rely on water supplies with high alkalinity.

The pH of the nutrient solution is a major factor in determining the uptake rate of many essential nutrient ions. Run pH too high and the dreaded nutrient



file:///C:/Users/SHIVADONTH/Downloads/hydroponics-master/Html_codes/index.html#login



DISPLAY DATA

Temperature	Humidity	pH	Water Level
28	55	6.92	150
28	56	6.90	163
28	59	6.91	160
29	62	6.86	157
28	59	6.88	162
27	55	6.79	168
28	59	6.8	168
28	62	6.76	172
28	61	6.78	165
29	62	6.79	166
29	62	6.79	166
28	56	6.82	171
29	52	6.85	167
29	52	6.85	167

