AUTOMATIC WATER PUMP

Using 555 timer and transistor .This project helped me understand them more in a real application

The BC547 used to amplify the signal of sensors with a resistor of 10k to protect transistor from high current peaks in gate

Also transistor used on output to amplify the signal to the relay and activate it

The relay is used for control the motor and protection of high load of the motor

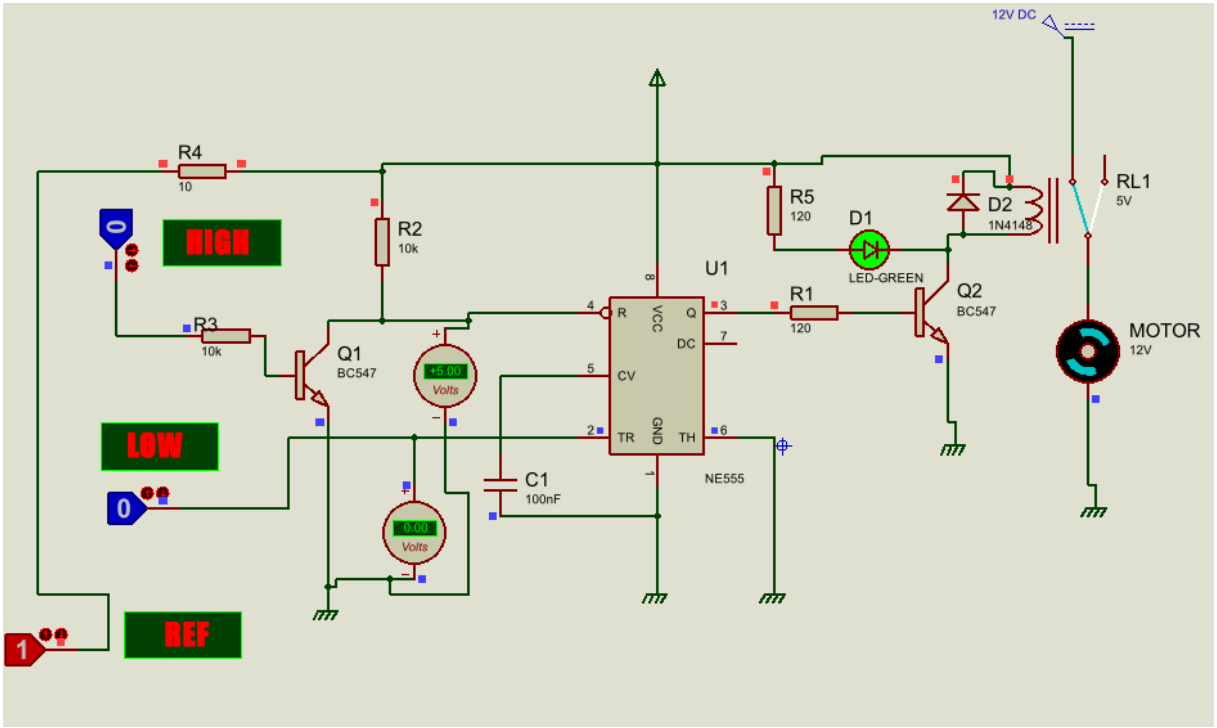
When ne555 is output off the motor is off

The ne55 is on when the sensor of high is off and low sensor is off

When high is On motor turn off because the ne555 reset is off

This circuit only works when sensor high is off because the pin4 is pulled up by resistor so the reset is on

If HIGH sensor is off and motor is off. It can only turn when low sensor becomes OFF because when LOW sensor is off it make pin2 0Volt and it sets the ne555

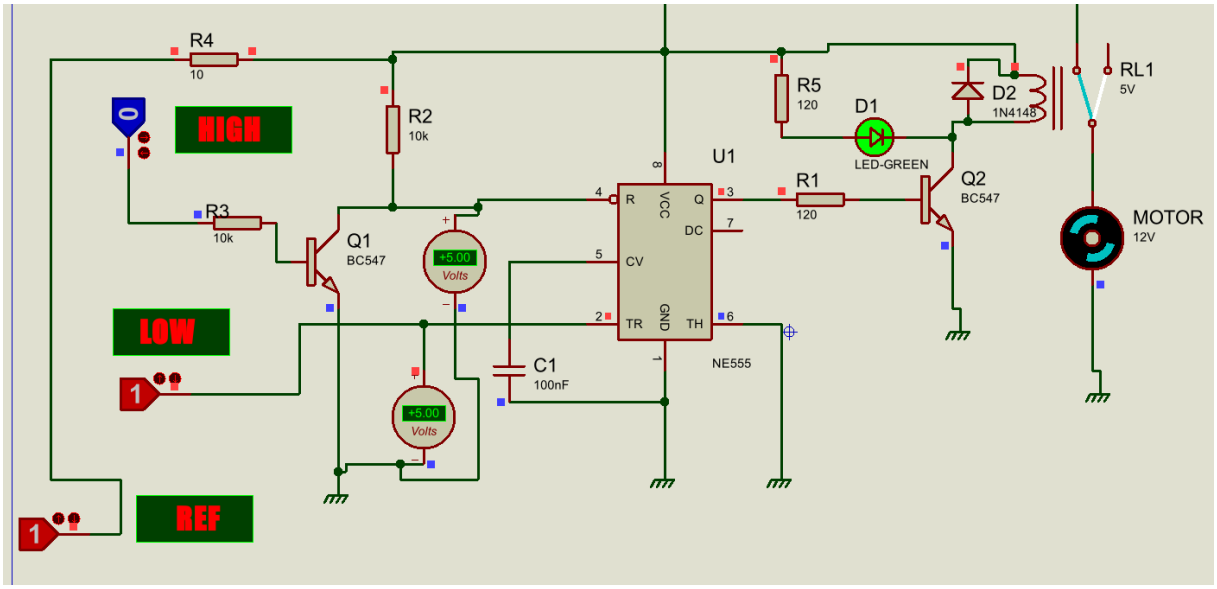


SENSOR HIGH 0 AND LOW SENSOR 0

➔pin4 is pull up so it have 5V so reset mode is off because its NoT gate

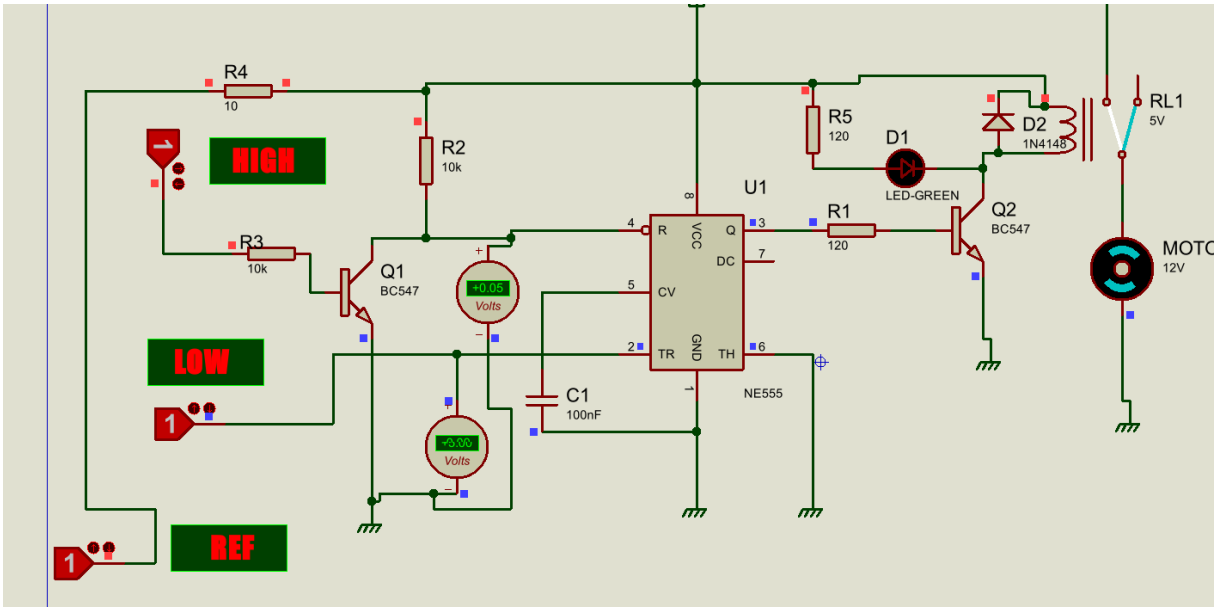
➔pin2 have 0V

⇨ Motor is ON

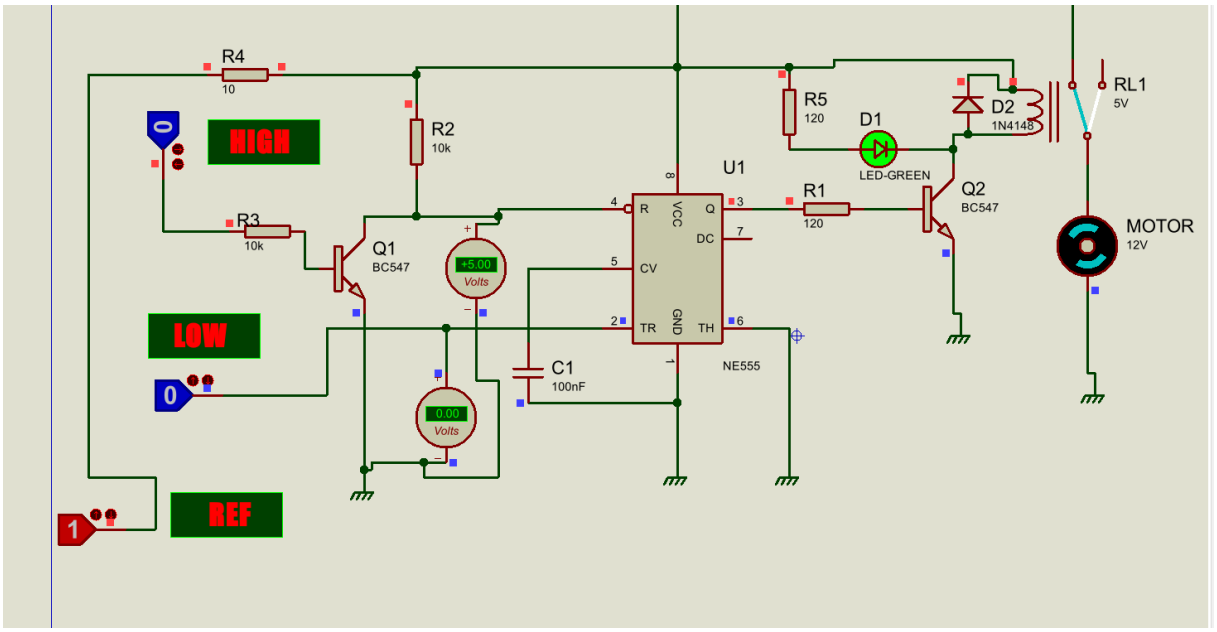


When the set mode is activate

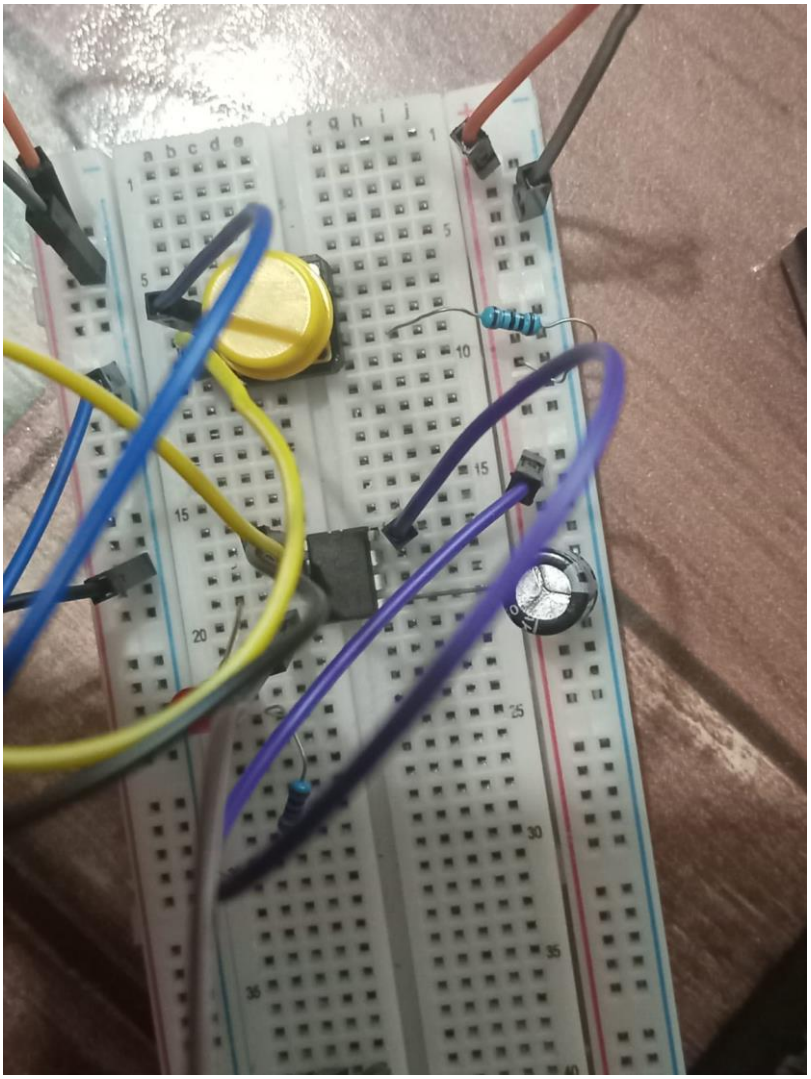
Now the LOW sensor have no impact the motor will only shut down when HIGH sensor become 1

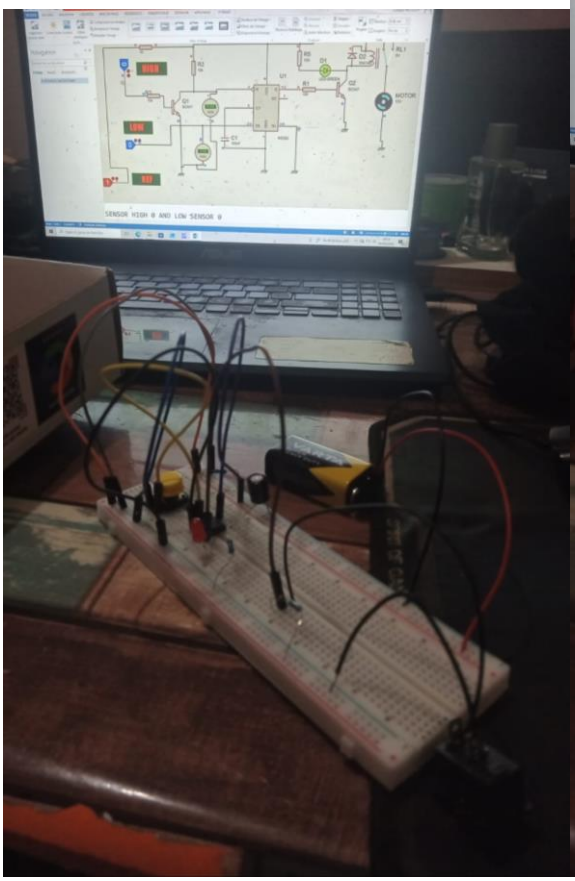


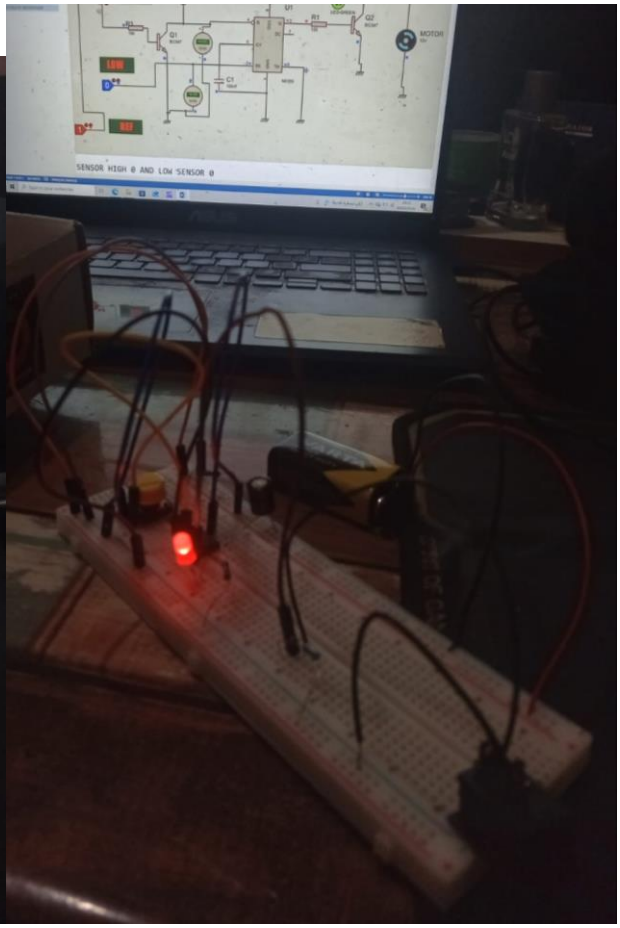
The motor will only turn when the LOW sensor gets back to 0



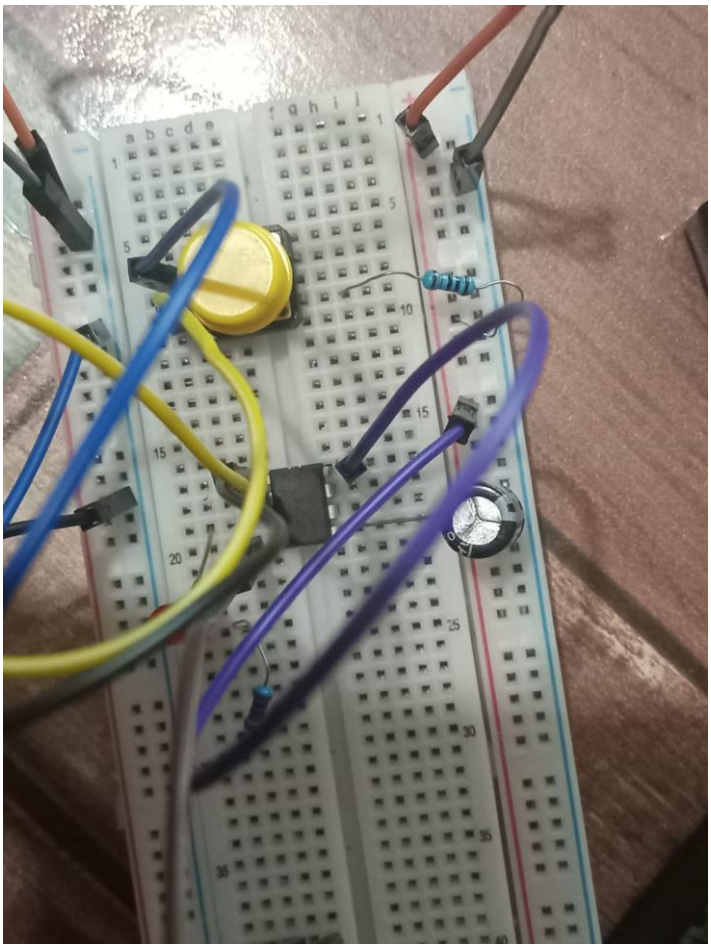
PRACTICAL only 555timer with switches

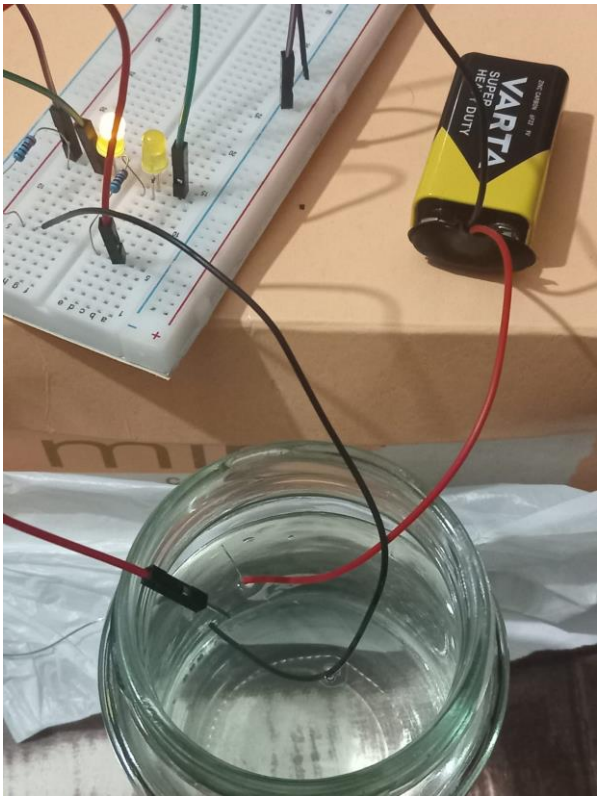


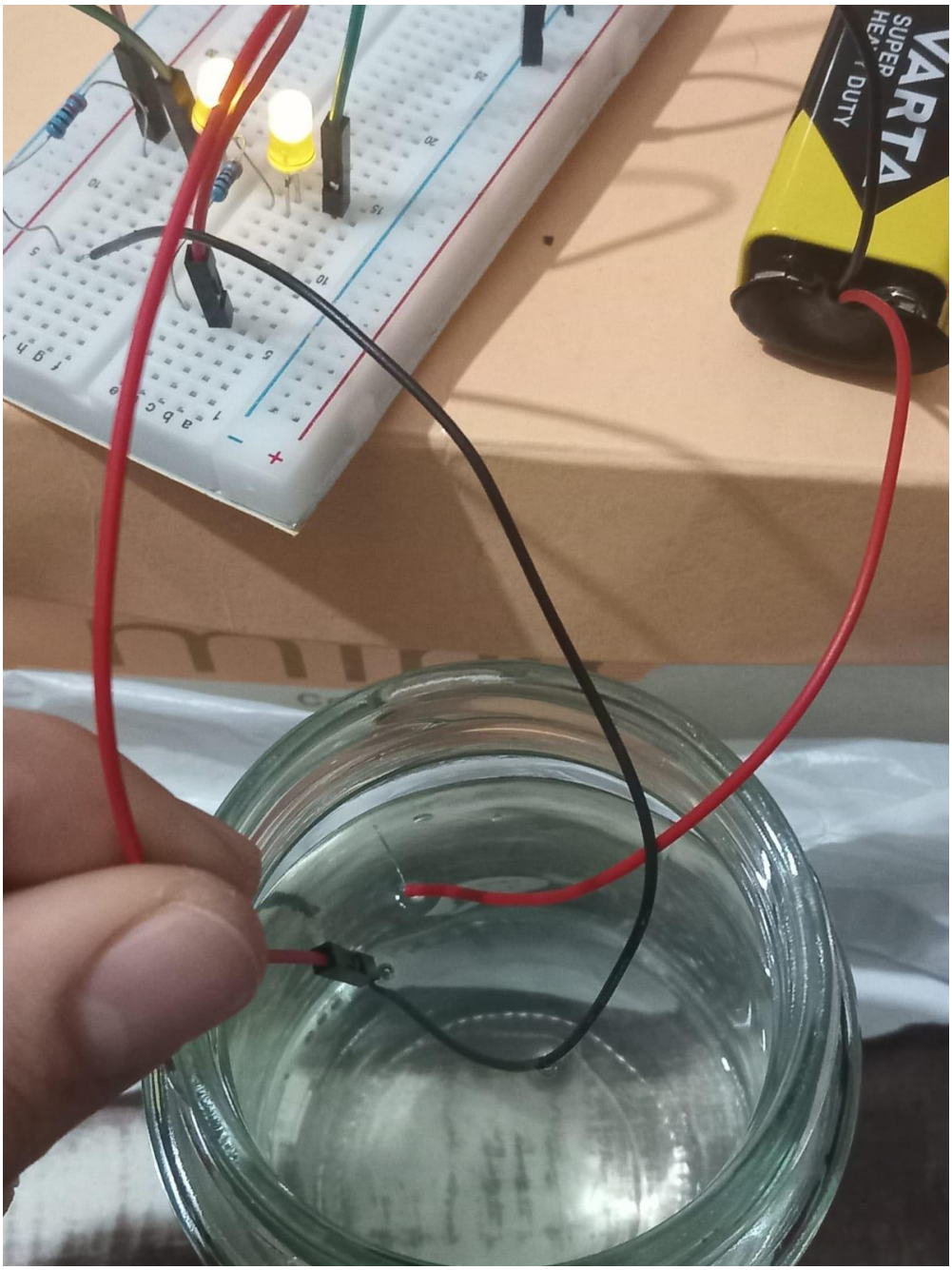

SENSOR HIGH 0 AND LOW SENSOR 0


SENSOR HIGH 0 AND LOW SENSOR 0

Practical water level detector






VARTA
SUPER
DUTY

WATER DETECTOR WITH SIGNAL TO START PUMPING IN WATER

No motor used here because I don’t have a relay and pump motor now. just a led signalling the motor should run