HOME AUTOMATION

AFRITH.S
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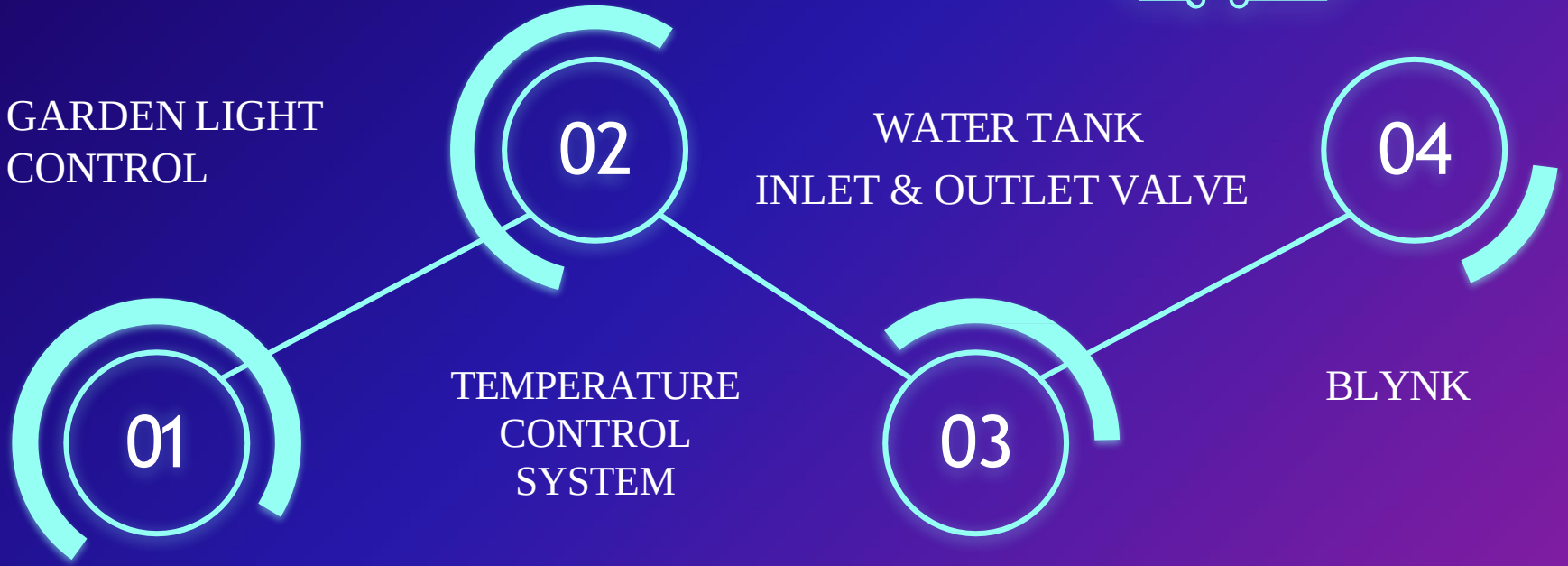
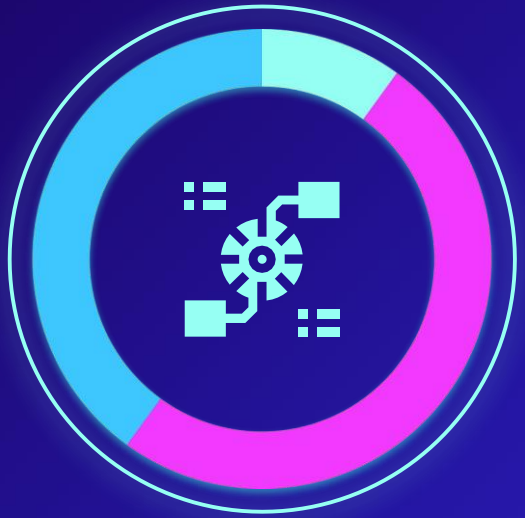
PROJECT REQUIREMENTS



SOFTWARES USED

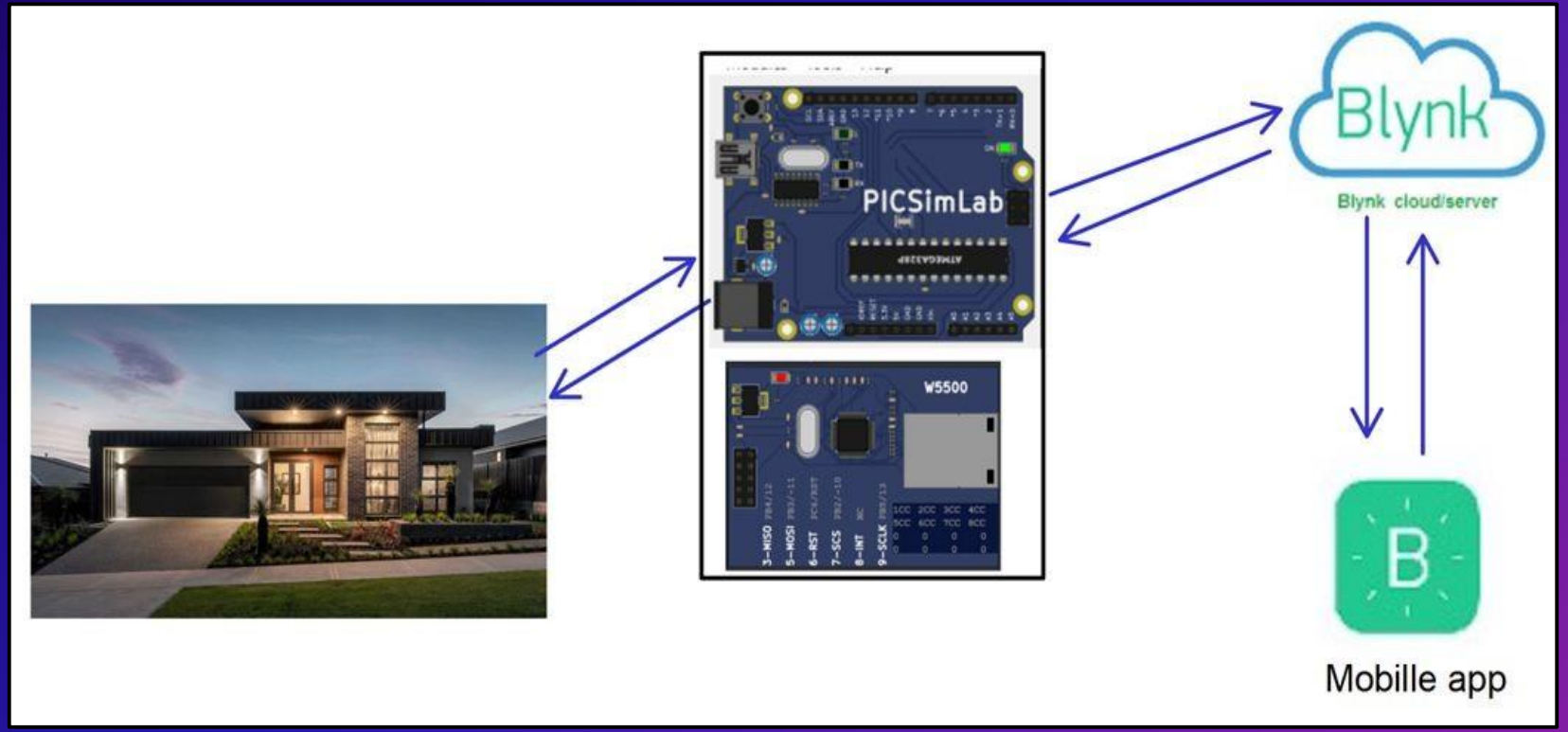


1 ARDUINO IDE

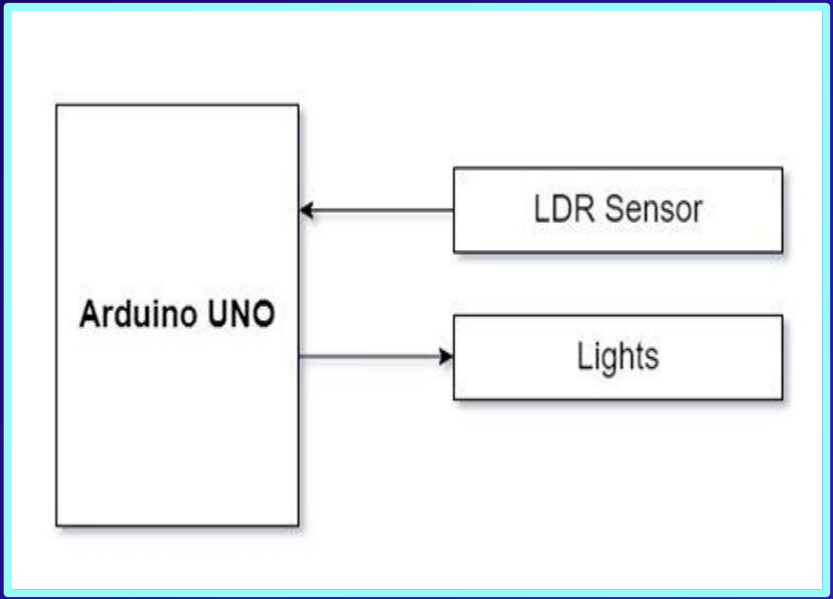
2 PICSIMLAB

3 BLYNK APP

HOME AUTOMATION PROJECT REQUIREMENTS



GARDEN LIGHTS CONTROL

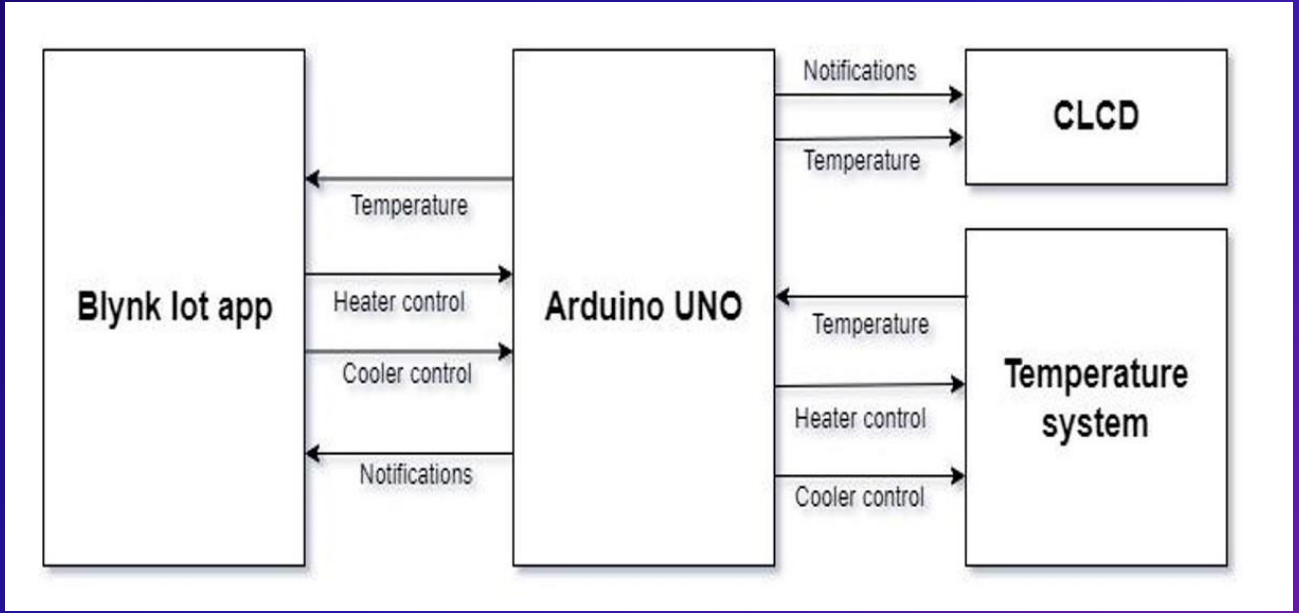


The process involves reading the LDR sensor value, and based on the reading, adjusting the brightness of the LED to mimic garden lights that automatically adjust their brightness based on the availability of sunlight. This is achieved by varying the voltage supplied to the LED based on the LDR reading.

More sunlight : Less Resistance: More voltage

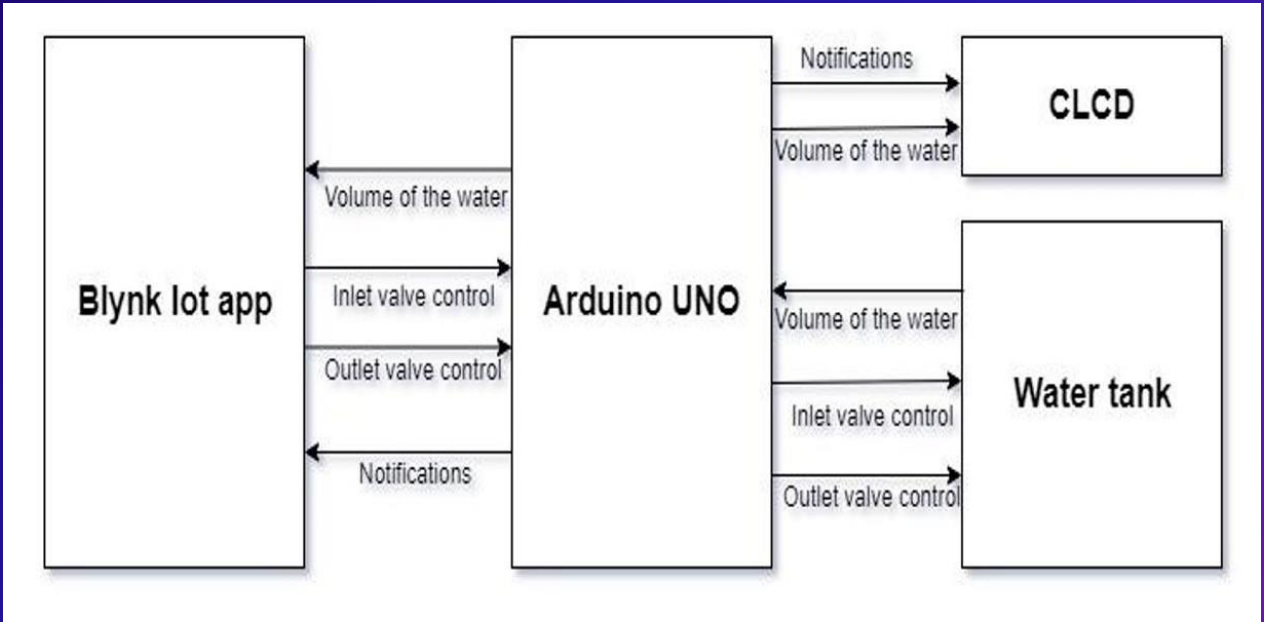
Less sunlight : More Resistance: Less voltage

TEMPERATURE CONTROL SYSTEM



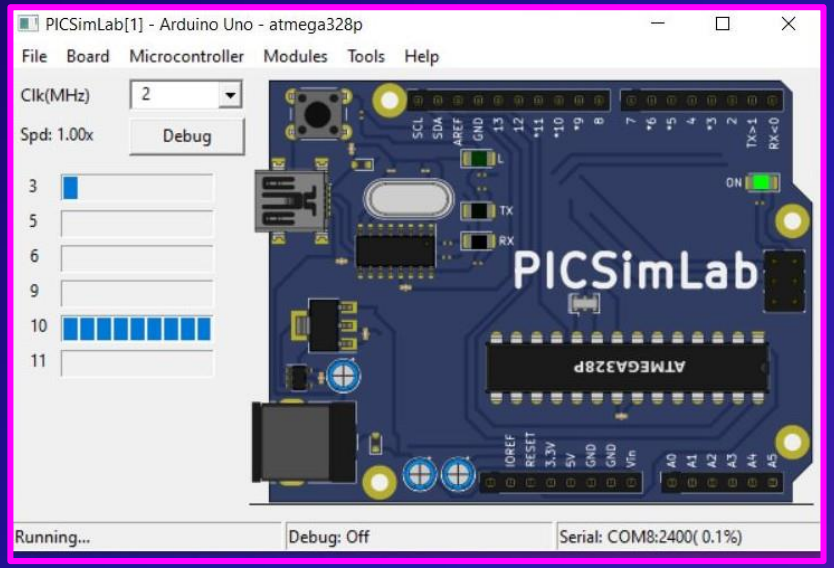
- The temperature control system has a LM35 temperature sensor, heater and a cooler.
- Read the temperature from LM35 temperature sensor and display it on the CLCD.
- Control the heater and cooler using BLYNK APP
- If the temperature is more than 35 turn OFF the heater and send notification to Blynk IOt app and display the same on the CLCD.

WATER TANK INLET AND OUTLET VALVE CONTROL



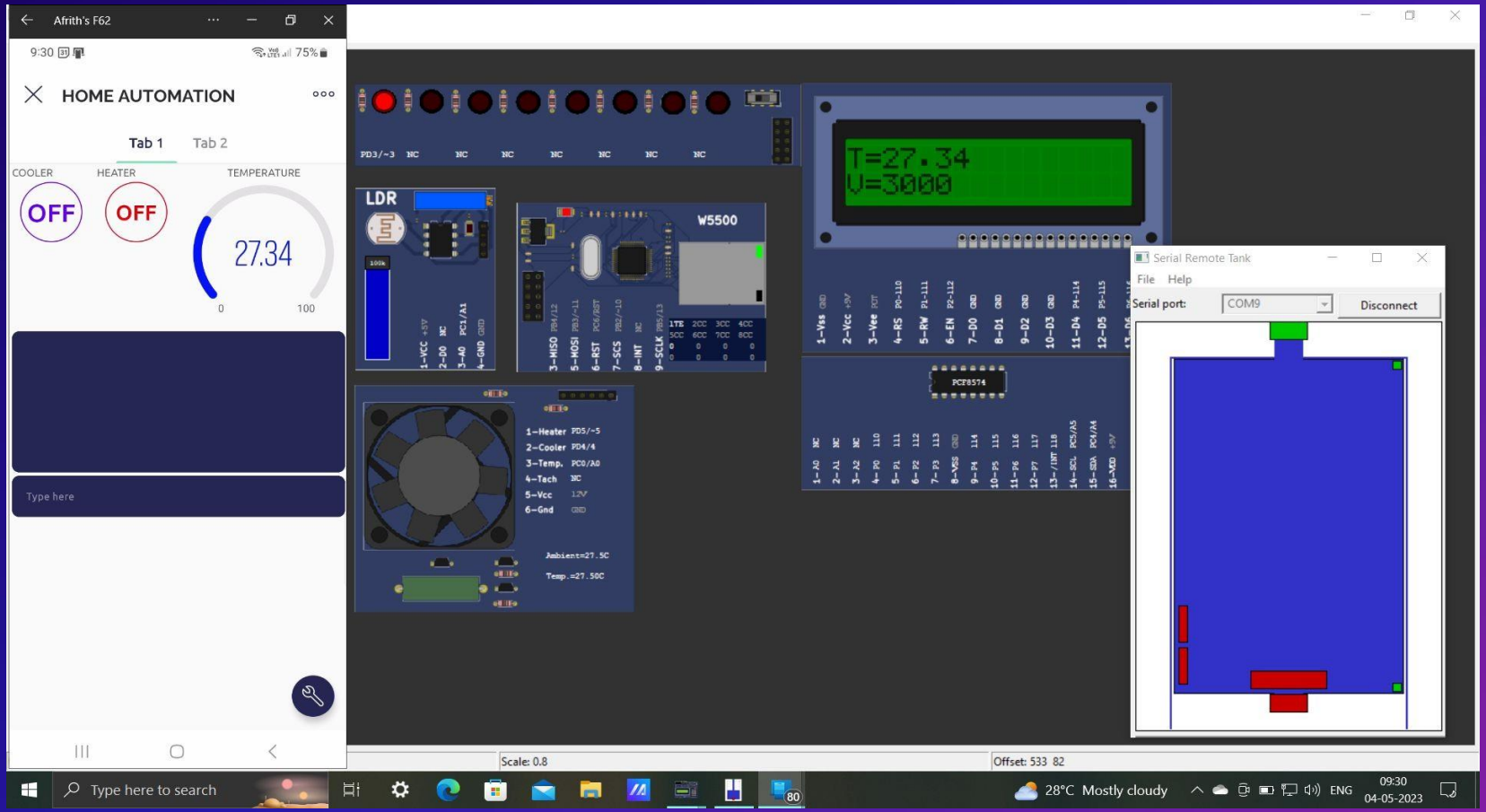
- Read the volume of the water in the tank through Serial Communication and display it on the CLCD.
- Control the volume of the water in the tank by controlling the inlet and outlet valve, by sending commands through serial communication.
- Display the volume of water in the tank on the CLCD.

PICSIMLAB AND BLYNK

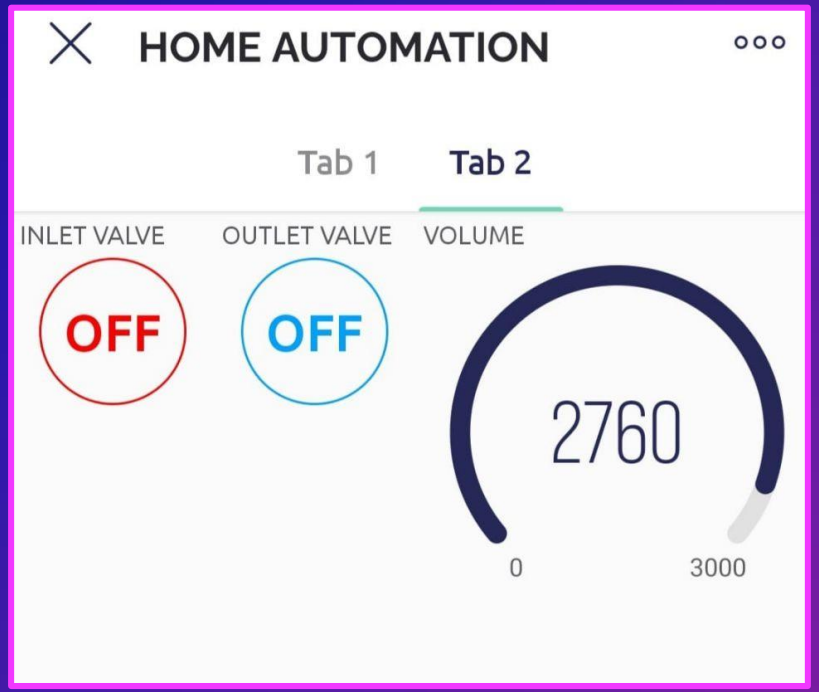


Blynk

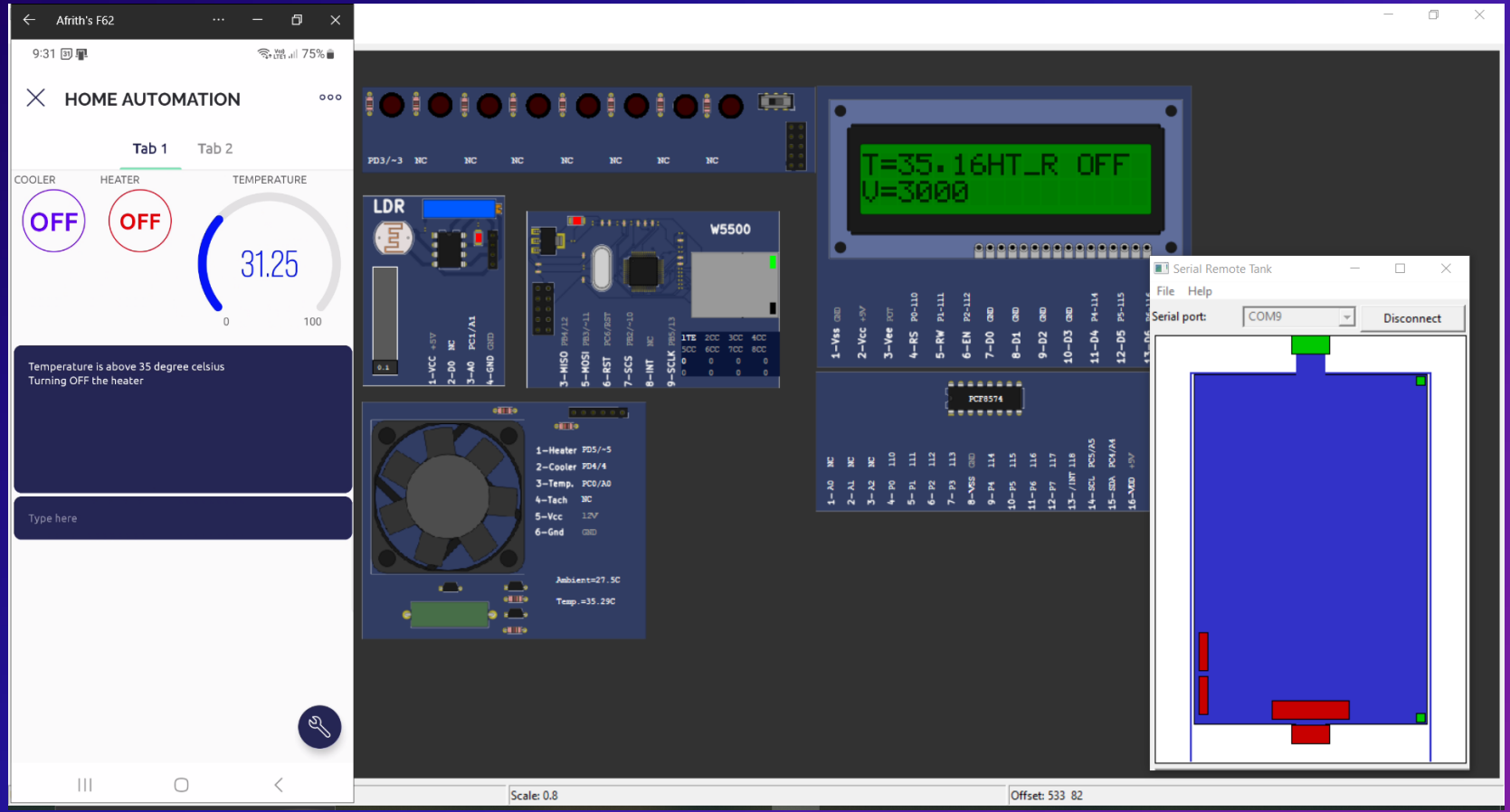
Initial window after loading the program



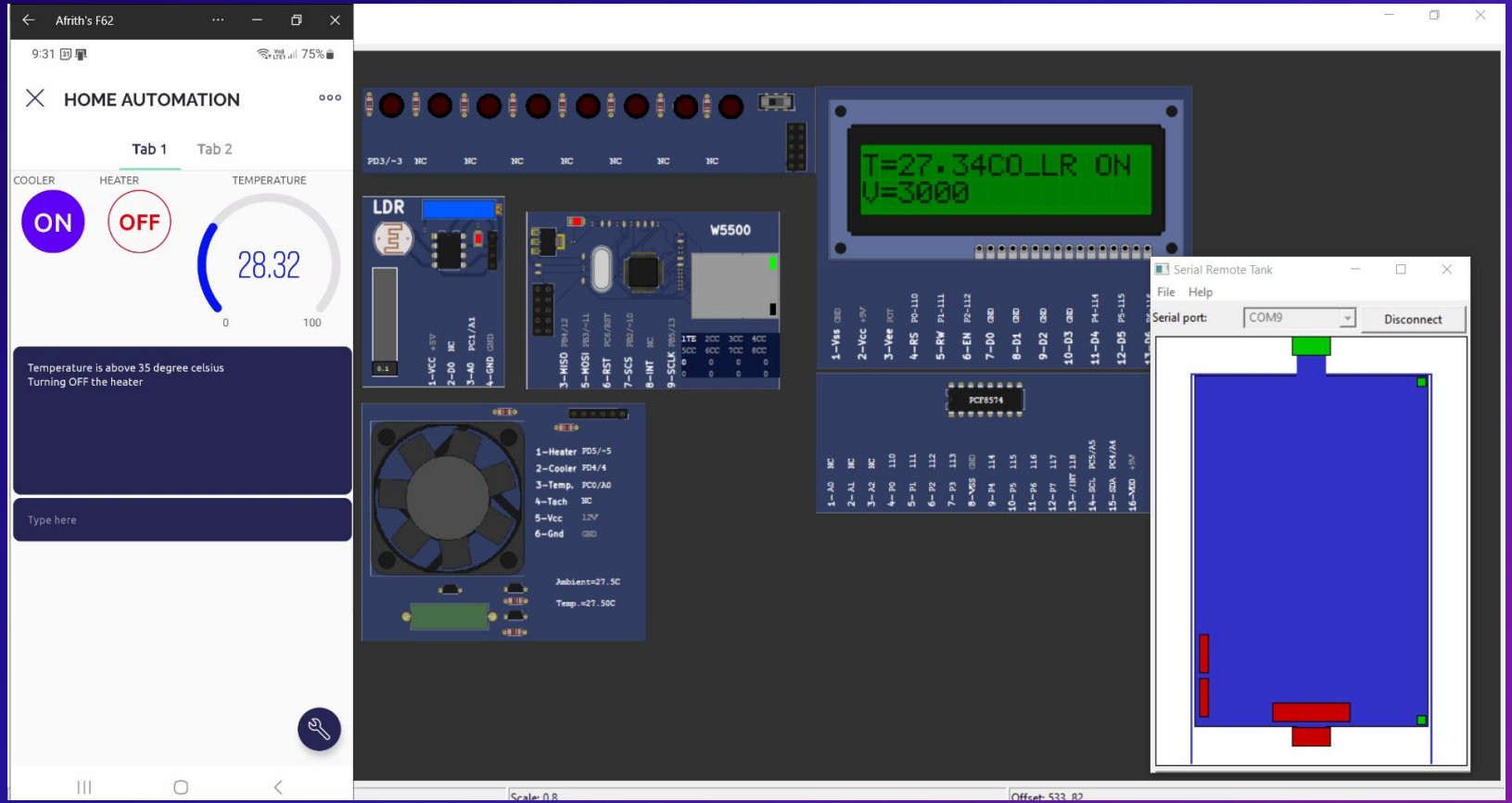
Blynk interface



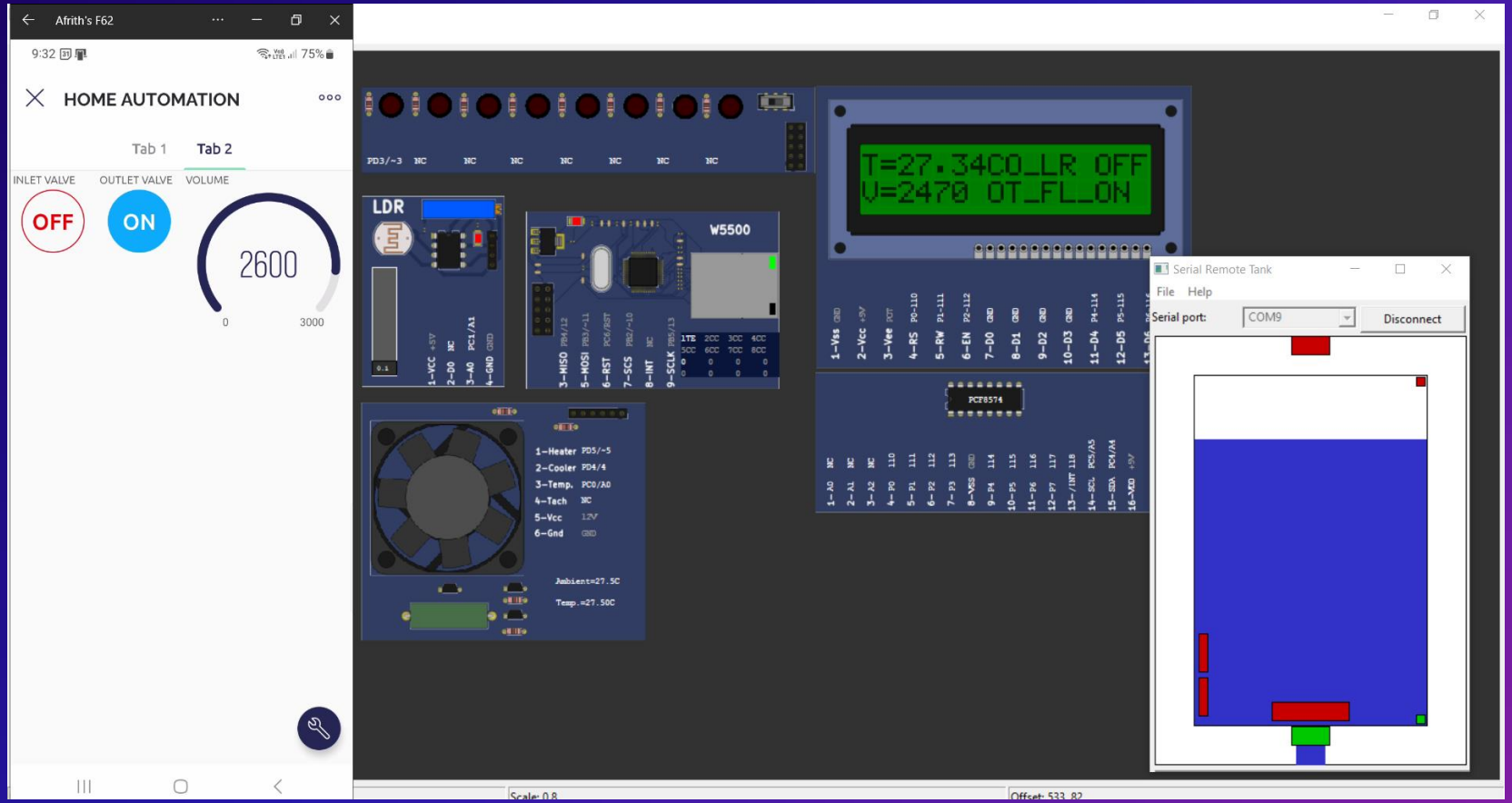
Turning off the heater when temperatures increases above 35 degree Celsius



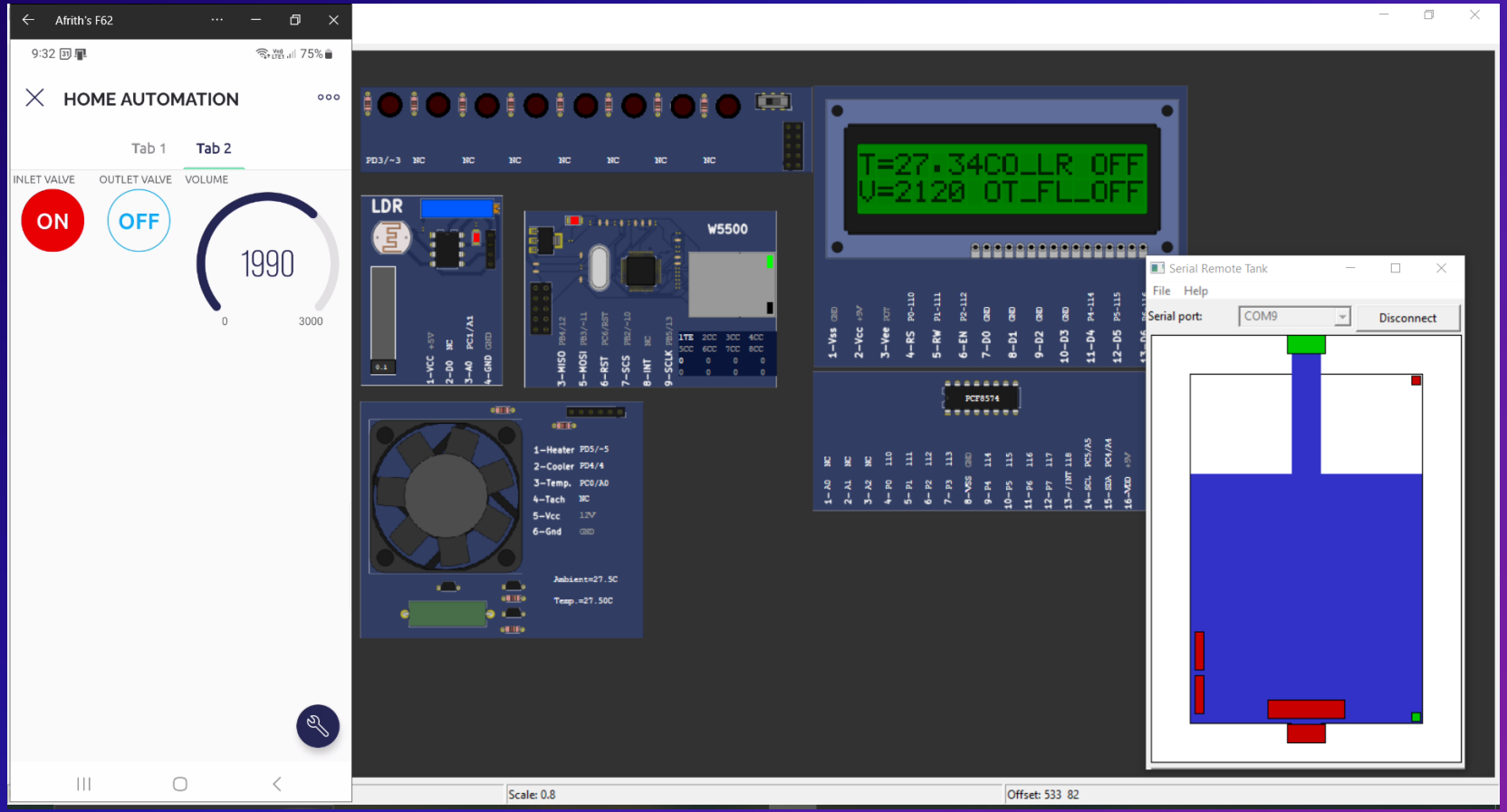
Turning ON the cooler :



Opening the outlet valve (Outlet Valve - ON)



Outlet valve is closed when volume of tank is less than 2000 litres. (Inlet Valve - ON)



PROJECT DEMO

This project aims control the lights based on availability of sunlight, temperature of the home, inflow and outflow of water in the water tank using Blynk application.

THANK YOU