  -- Table: userinfo

CREATE TABLE userinfo (

    id INT AUTO\_INCREMENT PRIMARY KEY,

    username VARCHAR(255) NOT NULL,

    password VARCHAR(255) NOT NULL,

    house\_number VARCHAR(50) NOT NULL,

    achievement VARCHAR(255),

    role VARCHAR(50) NOT NULL DEFAULT 'Owner',

    referral VARCHAR(255)

);

-- Table: devices

CREATE TABLE devices (

    id INT AUTO\_INCREMENT PRIMARY KEY,

    device\_name VARCHAR(255) NOT NULL,

    online\_status ENUM('on', 'off') NOT NULL

);

-- Insert sample data into devices

INSERT INTO devices (device\_name, online\_status) VALUES

    ('Smart Light', 'on'),

    ('Thermostat', 'off'),

    ('Smart Plug', 'on'),

    ('Security Camera', 'on');

-- Table: test (For energy consumption tracking)

CREATE TABLE test (

    id INT AUTO\_INCREMENT PRIMARY KEY,

    energy\_consumption DOUBLE NOT NULL,

    time\_stamp DATETIME NOT NULL

);

-- Insert sample data into test

INSERT INTO test (energy\_consumption, time\_stamp) VALUES

    (15, '2024-01-01 08:00:00'),

    (225, '2024-01-01 09:00:00'),

    (50625, '2024-01-01 10:00:00'),

    (2555555555, '2024-01-01 11:00:00'),

    (8888888888888888888888888888, '2024-01-01 12:00:00'),

    (2, '2024-01-01 08:00:00'),

    (4, '2024-01-01 09:00:00'),

    (16, '2024-01-01 10:00:00');

-- Table: device (For storing device details)

CREATE TABLE device (

    id INT AUTO\_INCREMENT PRIMARY KEY,

    devicename VARCHAR(255) NOT NULL,

    pin INT NOT NULL UNIQUE,

    standard\_energy DECIMAL(10,2) NOT NULL,

    status ENUM('ON', 'OFF') DEFAULT 'OFF'

);

-- Table: devicecontrol (For controlling devices)

CREATE TABLE devicecontrol (

    id INT AUTO\_INCREMENT PRIMARY KEY,

    pin INT NOT NULL,

    standard\_energy DECIMAL(10,2) NOT NULL,

    startingontime DATETIME NOT NULL,

    endingofftime DATETIME DEFAULT NULL,

    duration INT DEFAULT NULL, -- Duration in minutes

    FOREIGN KEY (pin) REFERENCES device(pin) ON DELETE CASCADE

);

-- Ensure pin uniqueness in device table

ALTER TABLE device ADD CONSTRAINT unique\_pin UNIQUE (pin);

Arduino code  
  
#include <Wire.h>

#include <Adafruit\_Sensor.h>

#include <DHT.h>

#include <DHT\_U.h>

#define DHTPIN 2 // Pin where the DHT sensor is connected

#define DHTTYPE DHT11 // Change to DHT22 if using a DHT22 sensor

DHT dht(DHTPIN, DHTTYPE);

void setup() {

Serial.begin(9600);

dht.begin();

}

void loop() {

float temperature = dht.readTemperature(); // Read temperature in Celsius

if (isnan(temperature)) {

Serial.println("Error reading temperature!");

} else {

Serial.println(temperature); // Send the temperature value via Serial

}

delay(1000); // Wait for 1 second before reading again

}