"IoT–Based Smart Compressor Monitoring & Control System"

MODULAR BLOCK DIAGRAM
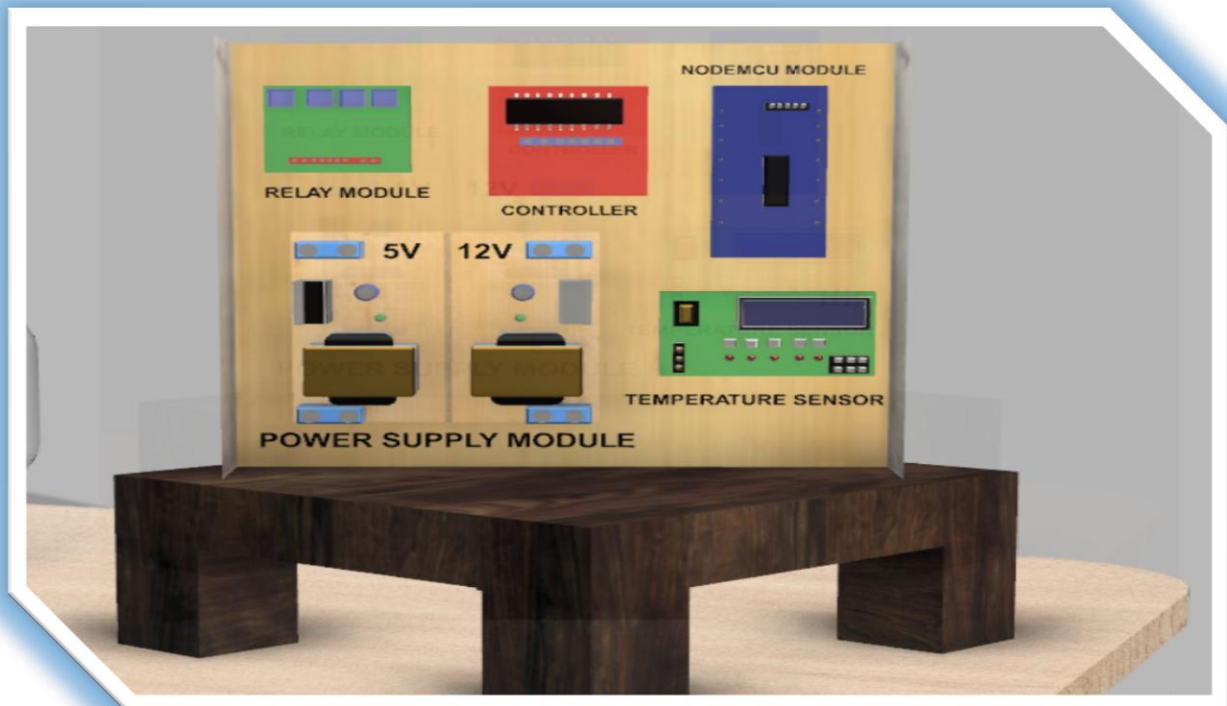
```
        A
230V AC SUPPLY    STEP DOWN         RECTIFIER AND        5V/1A    B
1PHASE 50Hz,2A    TRANSFORMER       REGULATOR CIRCUIT
                  9V/1A , 12V/1A                         12V/1A   C

                                                         MODULE 1

   B                  B                  B
              MODULE 2                        MODULE 3

PIC16F877A                              SENSOR
                  M                     MODULE
                  O
                  D    N
16 X 2  LCD       U    O                TEMPERATURE
DISPLAY           L    D                LM35
                  E    E
                  5    M                PRESSURE SENSOR
                       C
                       U                        C
WI-FI                                        MODULE 4

                                        RELAY MODULE
MOBILE

                                             MOTOR
```

INTER CONNECTION DIAGRAM

MODULE1

AC230V,50Hz

J1 — TR1 — J3 — POWER SUPPLY 6V — J4

AC230V,50Hz

J2 — TR2 — J6 — POWER SUPPLY 12V — J7

MODULE2

RELAY BOARD 2 CHANNEL — MOTOR

NODEMCU
ESP8266

MODULE 3

MODULE4

TEMPERATURE SENSOR

SENSOR PRESSURE

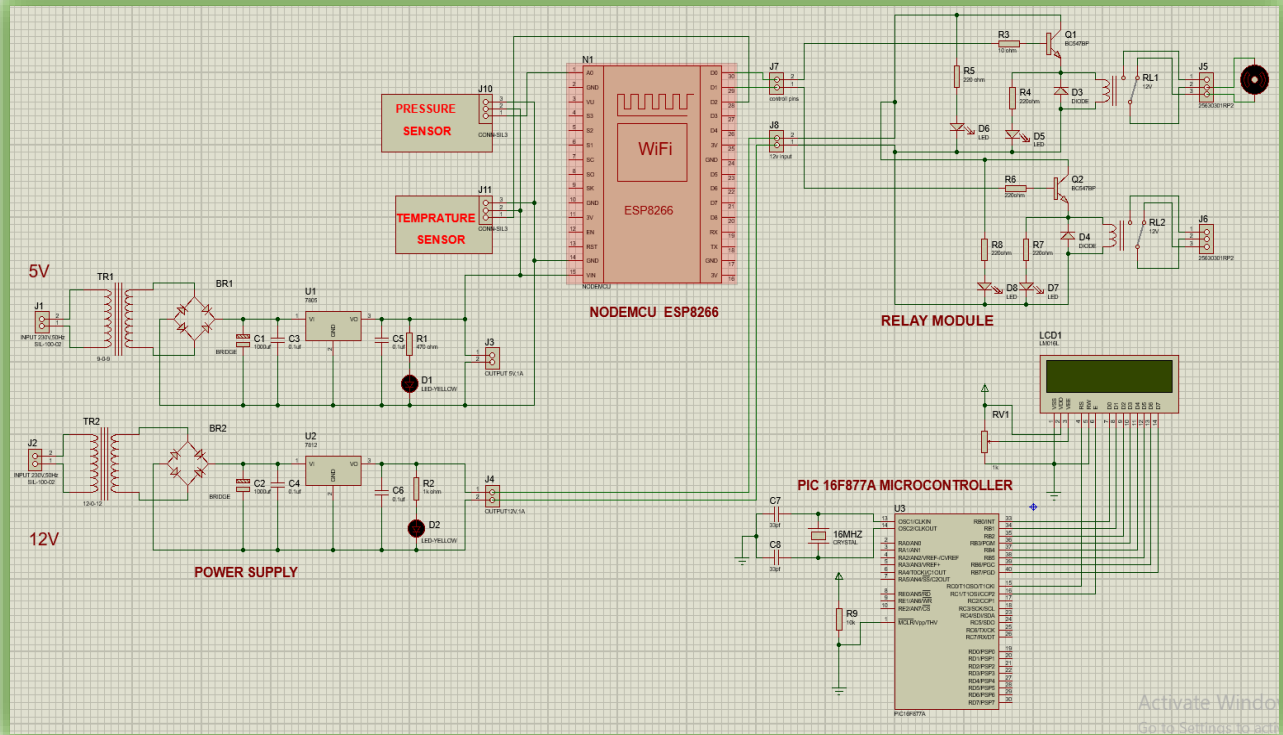PIC 16F877A

LCD 16X2

MODULE5

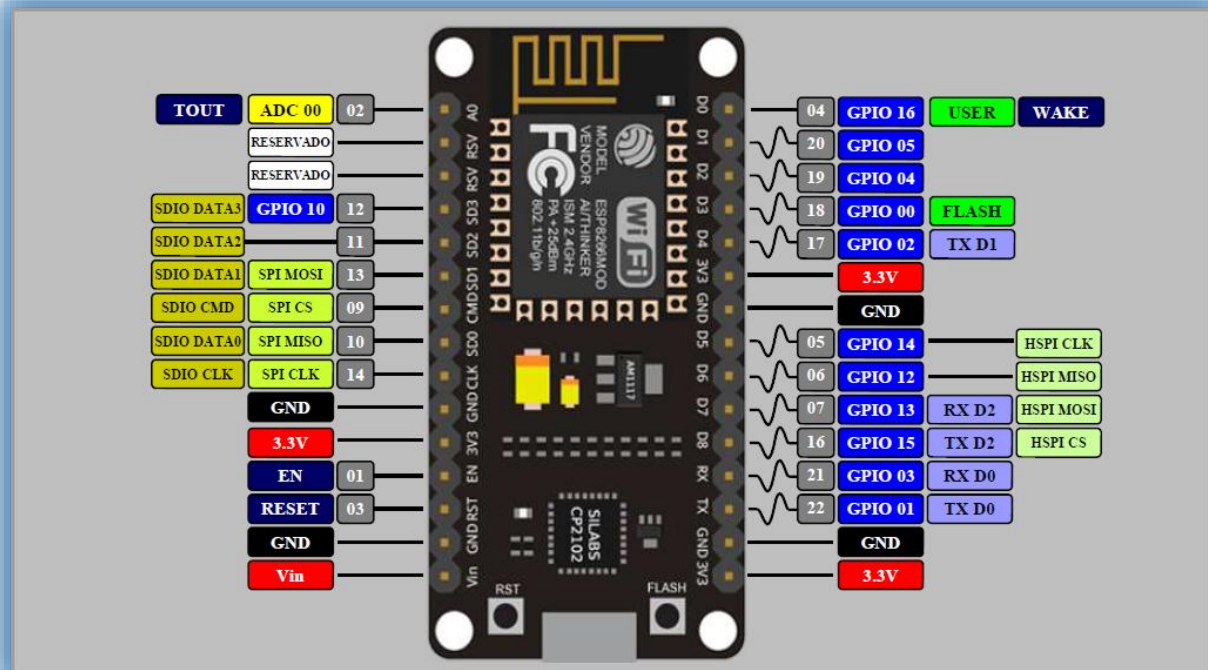# HARDWARE LAYOUT – 3D
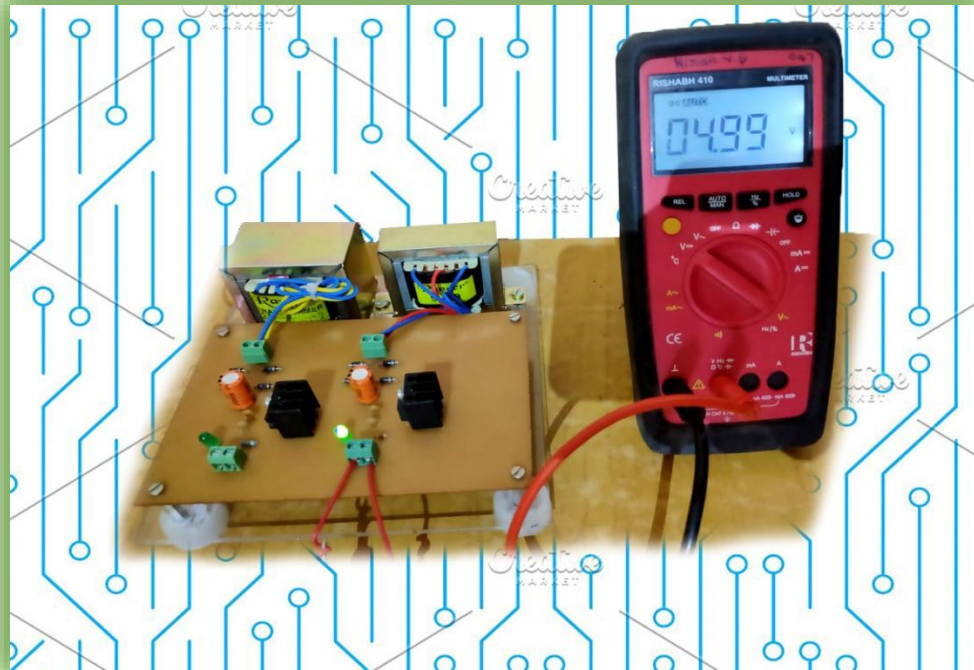

CONTROLE PANEL

SCHEMATIC DIAGRAM:

PIN DIAGRAM OF NODEMCU:
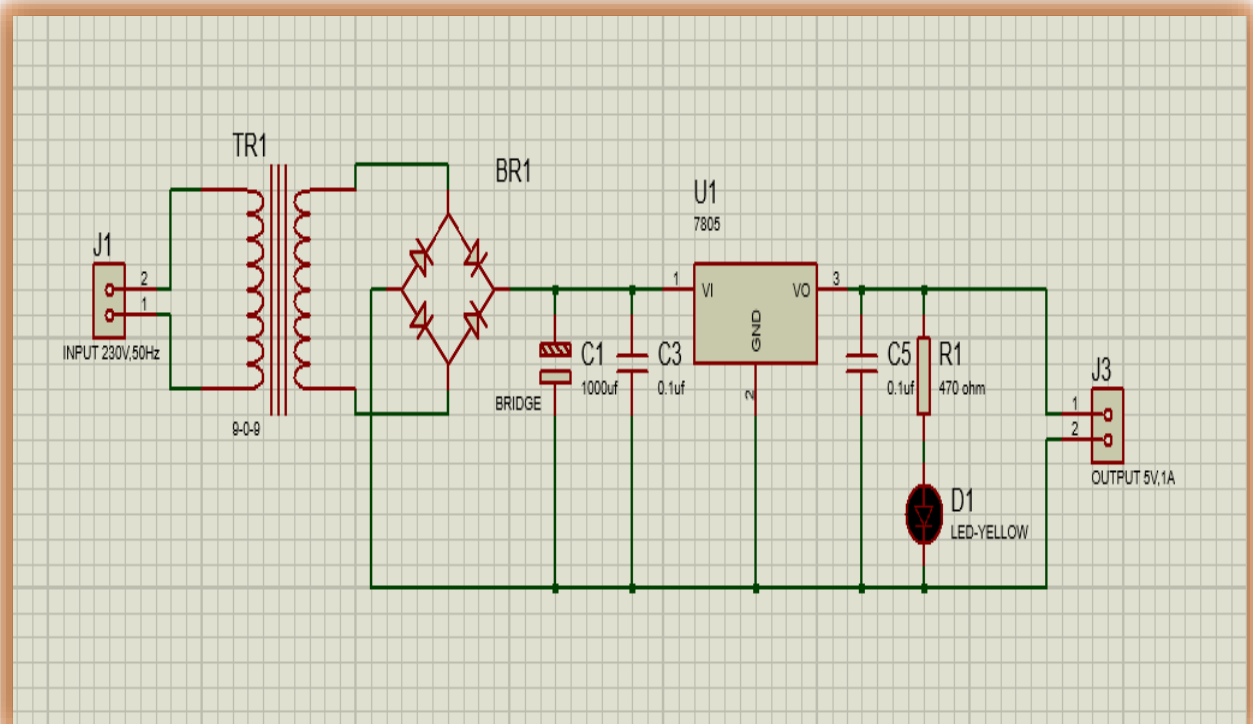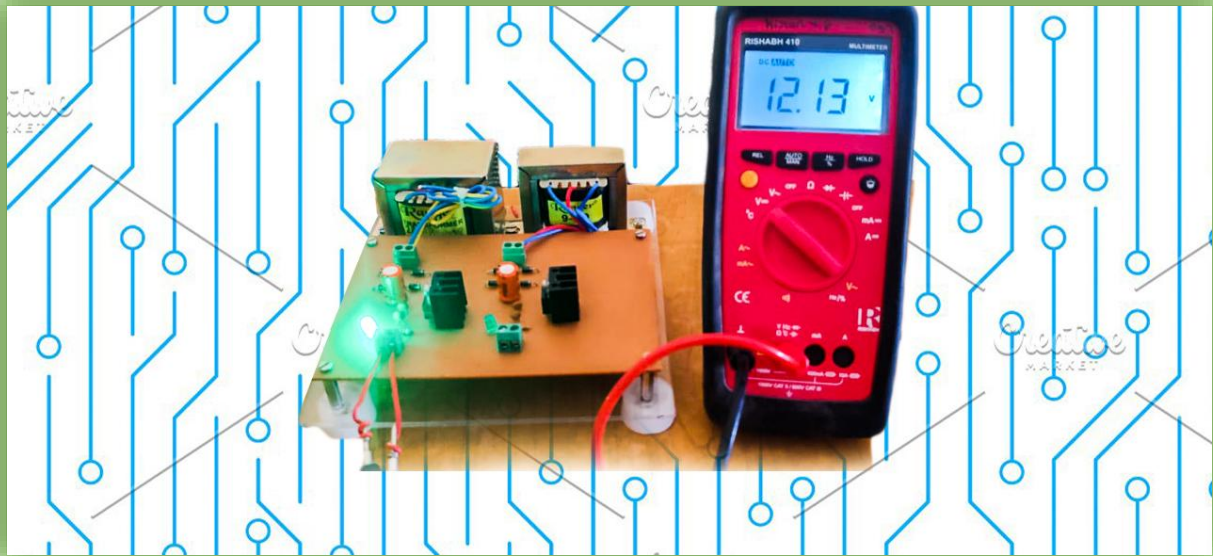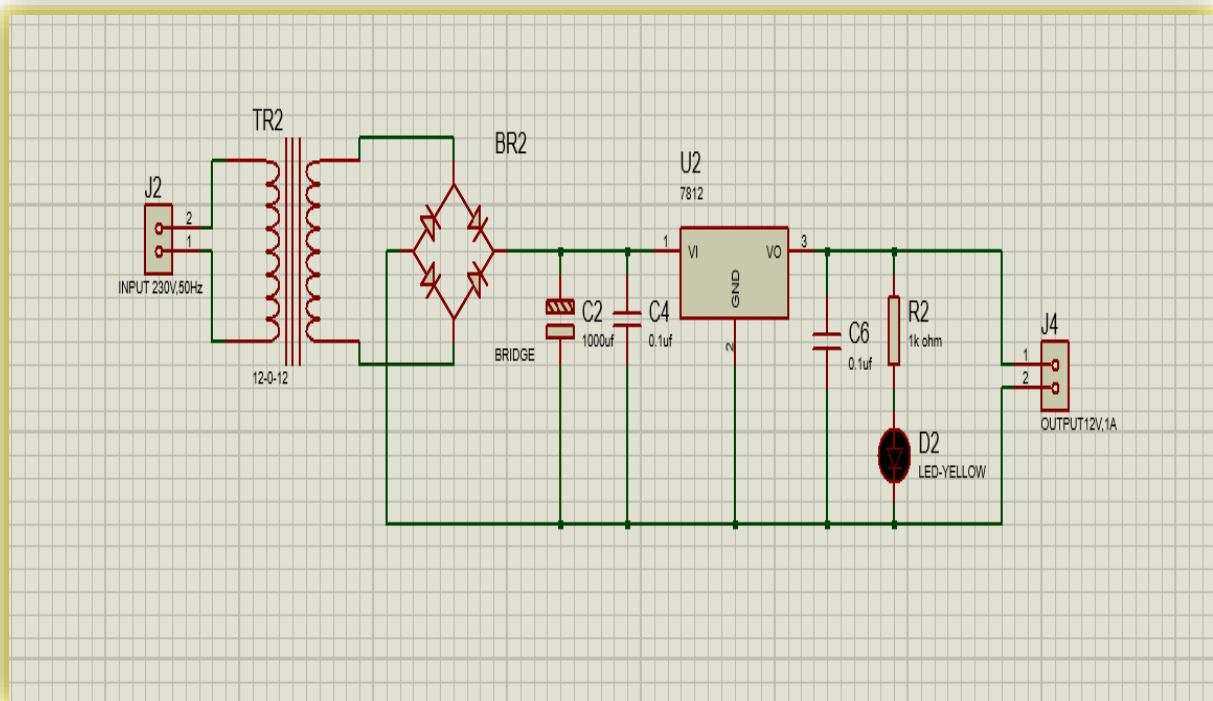
POWER SUPPLY

5V-POWER SUPPLY:

CIRCUITE DIAGRAM OF 5V.1A POWER SUPPLY:
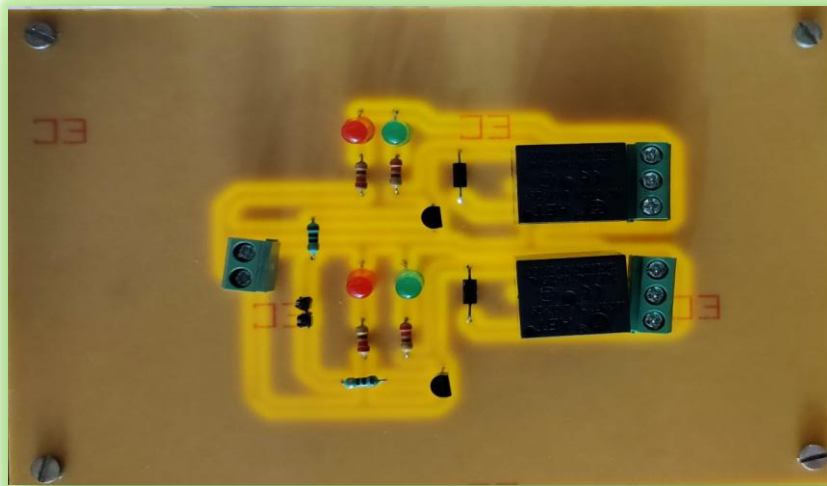
12V POWER SUPPLY

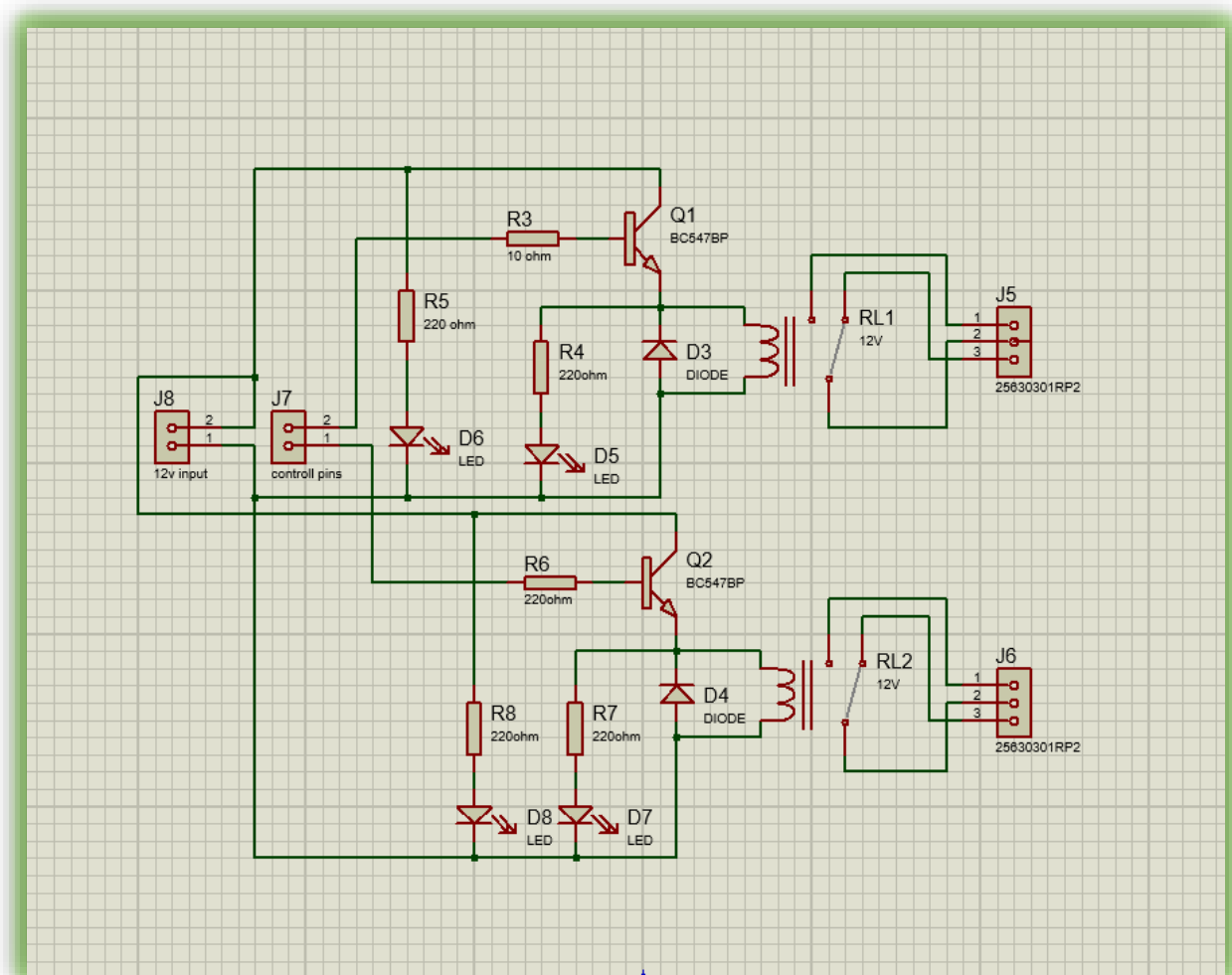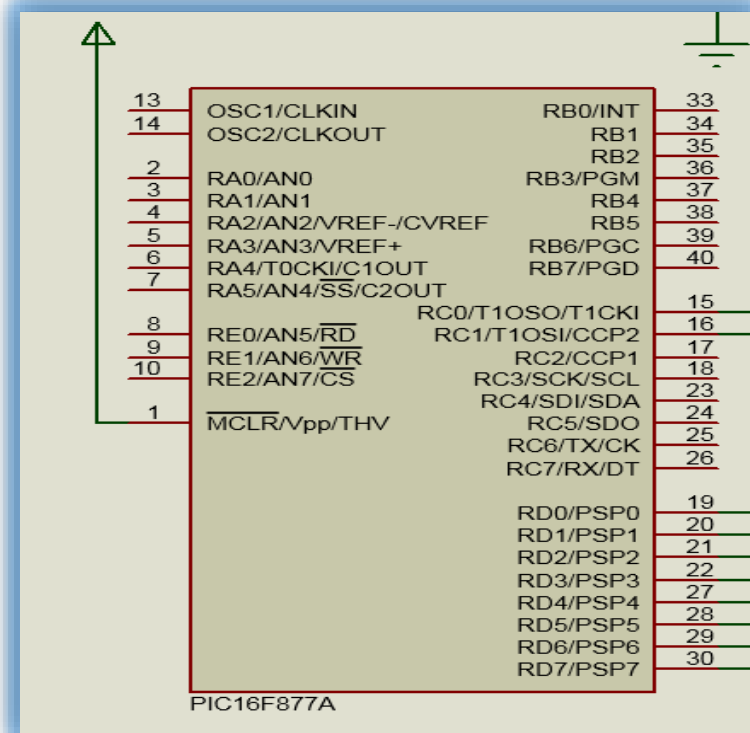# CIRCUITE DIAGRAM OF 12V.1A POWER SUPPLY:
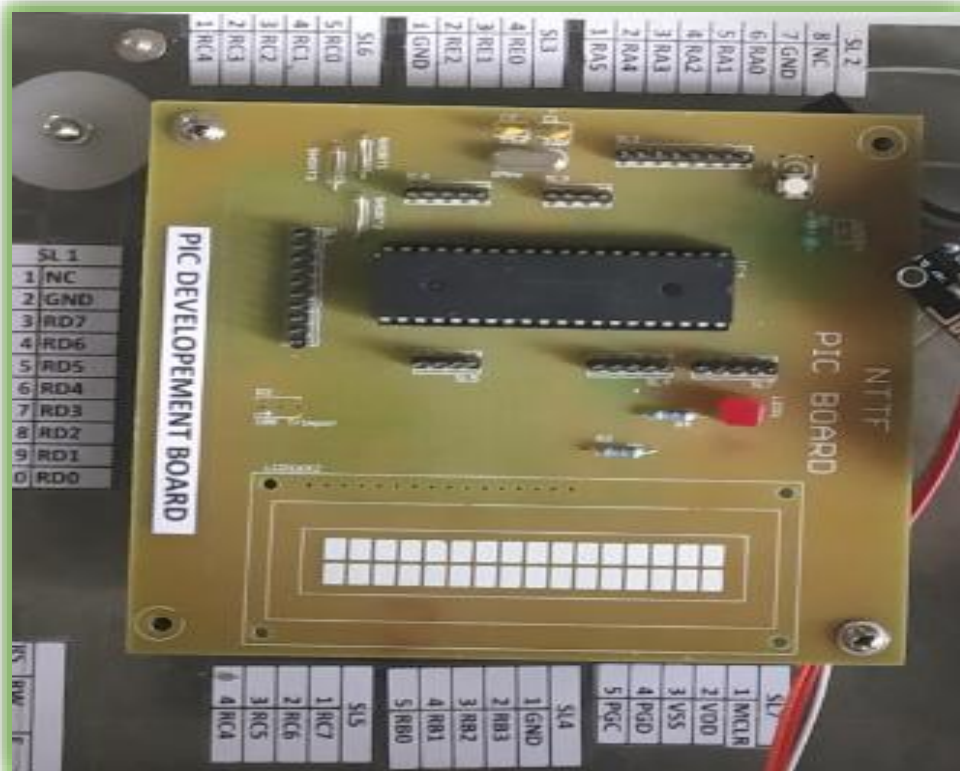
CHANNEL RELAY

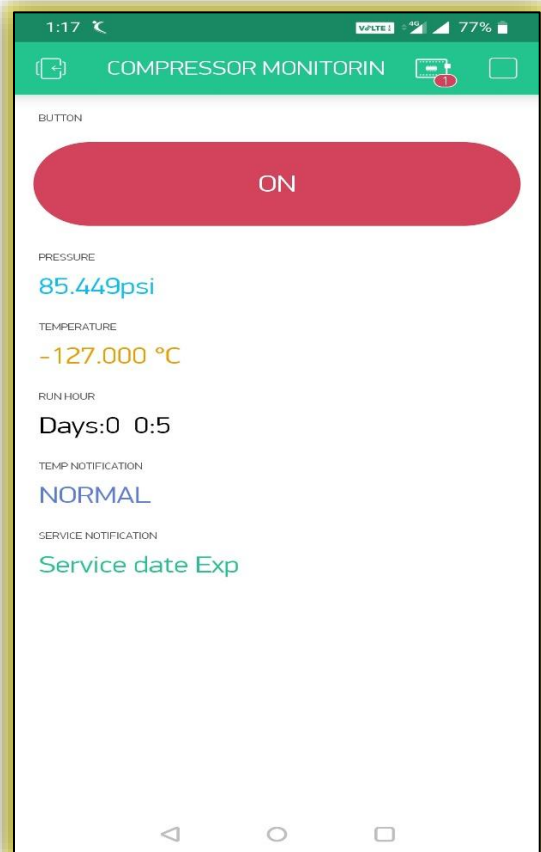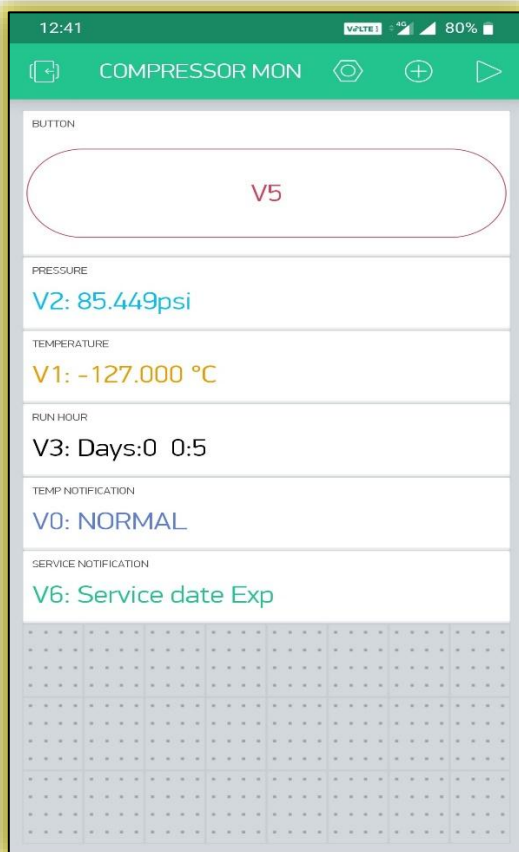## 8-CHANNEL RELAY:

CIRCUITE DIAGRAM OF 2CHANNEL RELAY BOARD:

PIC (Peripheral Interface Controller) DEVELOPMENT BOARD

PIC16F877A

PIC DEVELOPMENT BOARD

BLYNK APP DESIGN OF OUR PROJECT

THINGSPEAK

➢ Thing Speak is a popular platform used in Internet of Things (IoT) projects to **collect, visualize, and analyse live data streams in the cloud.**

➢ It is particularly valuable because it allows users to build IoT systems and perform advanced data analytics without needing to set up their own servers or develop complex web software