# LAB 10

## Robain PCB

**Bottom Copper layer**



145.669mm

157.861mm

**All Four layer**



145.669mm

157.861mm
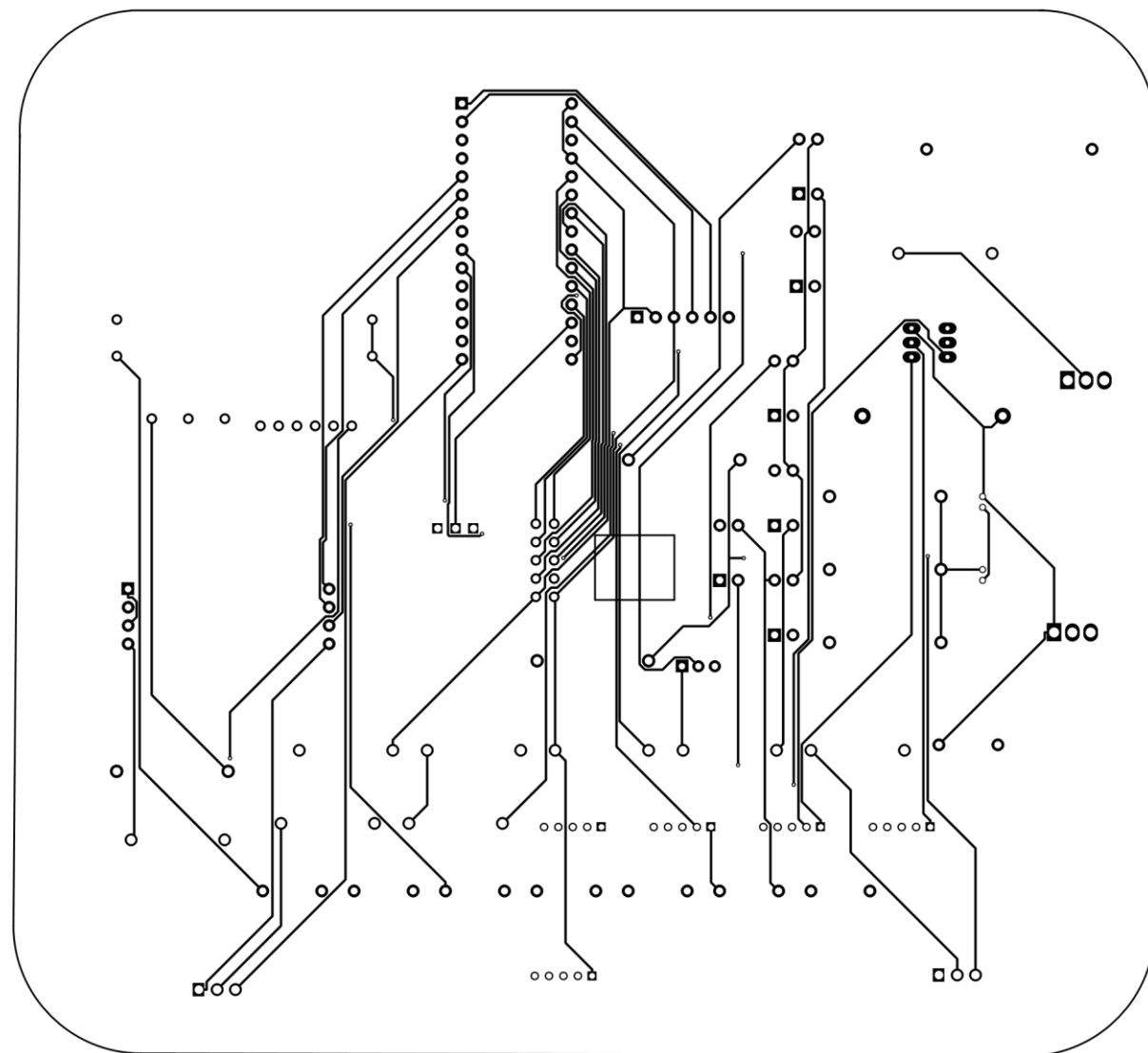
MUHAMMAD HARIS IRFAN (FA18-BCE-090)
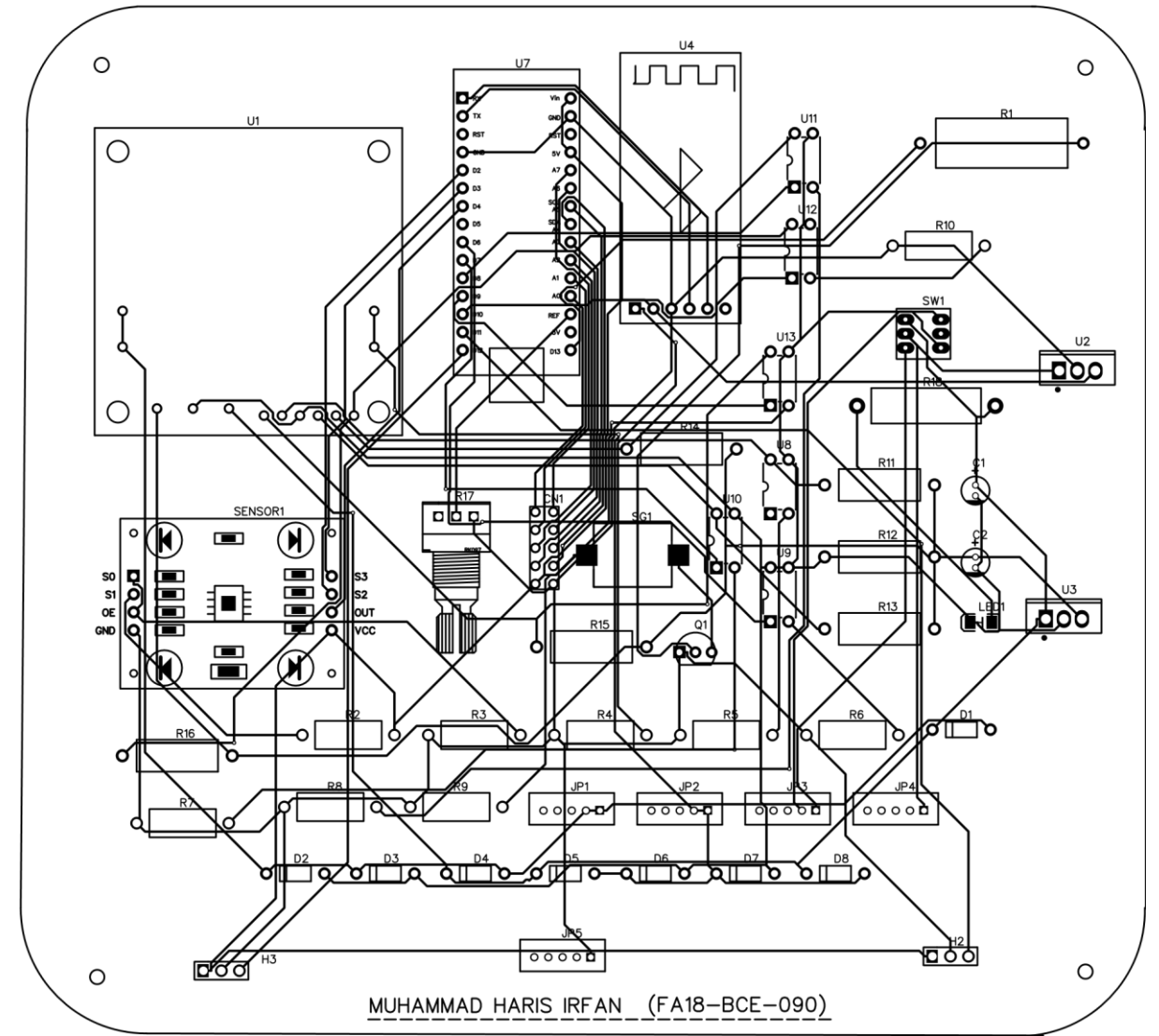
**Submitted by** Muhammad Haris Irfan

**Submitted to** Muhammad Imran Saeed Lodhi

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**Date: 28-09-20**

**Tom Copper layer**

145.669mm

MUHAMMAD HARIS IRFAN (FA18-BCE-090)

157.861mm



**Top Silk layer**

145.669mm

157.861mm
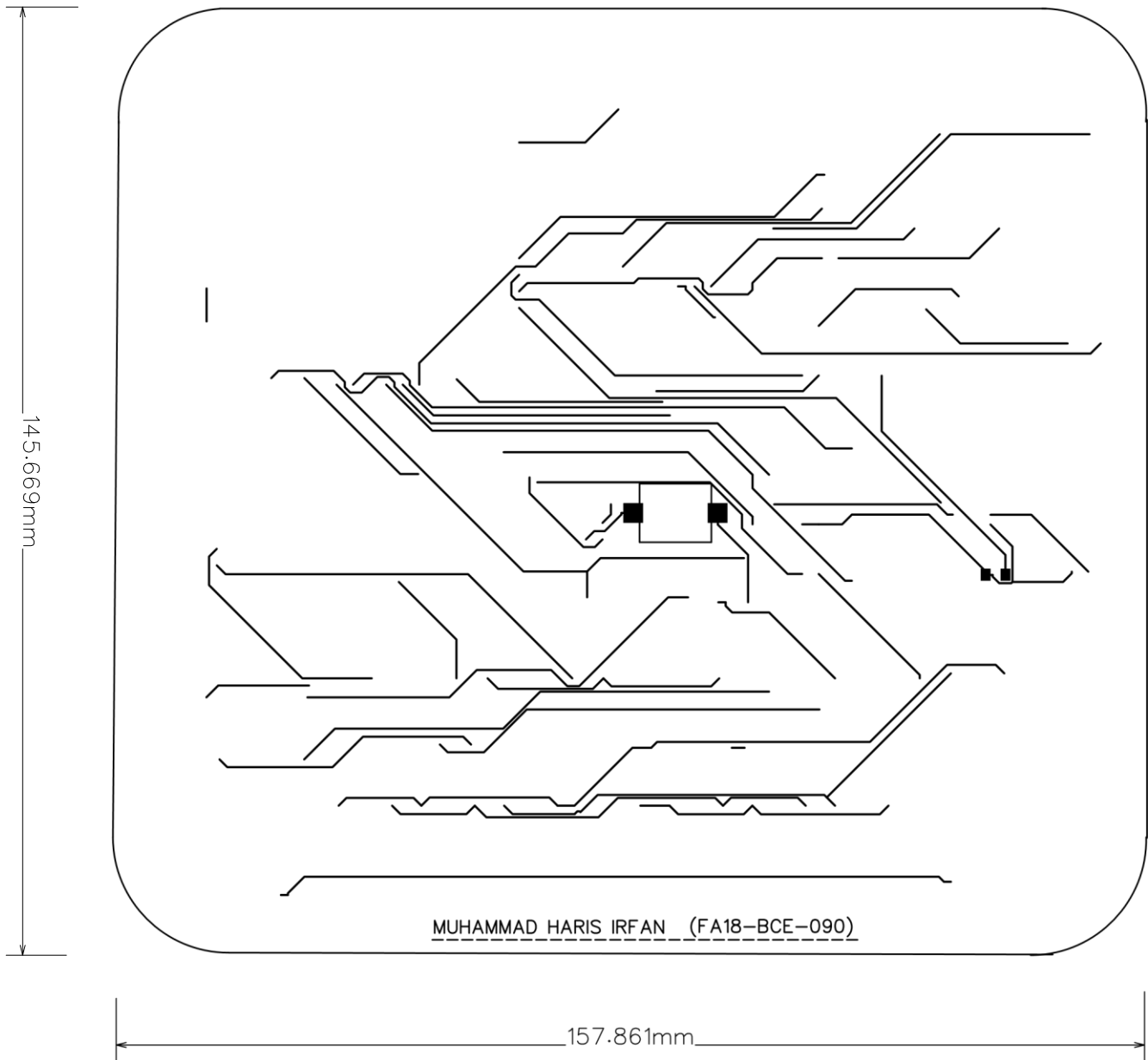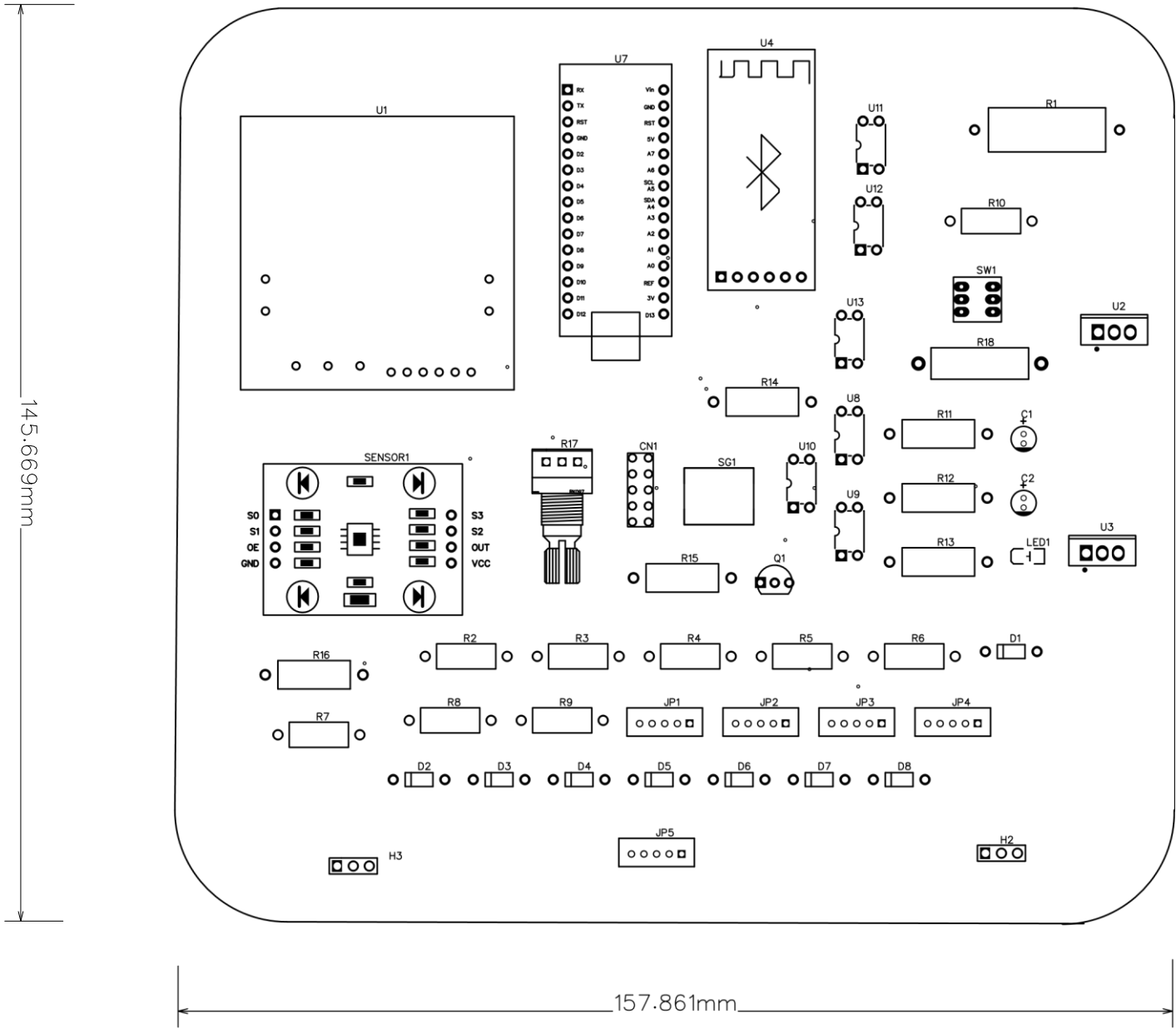
# Components Used

| ID | Name | Designator | Footprint | Quantity |
|---|---|---|---|---|
| 1 | 1N4448 | D1,D2,D3,D4,D5,D6,D7,D8 | DO-35_BD2.0-L4.2-P8.20-D0.5-R-RD | 8 |
| 2 | L298N | U1 | L298N | 1 |
| 3 | 10K | R17 | RES-ADJ-TH_RK097111080J | 1 |
| 4 | DPDT_SWITCH 6P | SW1 | 6 PIN PUSH SWITCH | 1 |
| 5 | TCS230 TCS3200 COLOR SENSOR | SENSOR1 | TCS230 TCS3200 COLOR SENSOR | 1 |
| 6 | 1.8K | R11,R12,R13,R14,R15,R16 | RES-TH_BD4.5-L11.5-P15.50-D0.7 | 6 |
| 7 | 220 | R5,R6,R7,R8,R9,R10 | RES-TH_BD3.5-L9.0-P13.00-D0.8 | 6 |
| 8 | 817 | U8,U9,U10,U11,U12,U13 | DIP-4_L4.6-W6.5-P2.54-LS7.6-BL | 6 |
| 9 | 100 | R1 | RES-TH_BD6.0-L17.5-P21.50-D0.8 | 1 |
| 10 | 0.1uF | C1,C2 | CAP-D4.0XF1.5 | 2 |
| 11 | LM7805T | U2 | TO-220-3_L10.0-W4.5-P2.54-L | 1 |
| 12 | U16 | U3 | TO-220-3_L10.0-W4.5-P2.54-L | 1 |
| 13 | BUZZER | SG1 | BUZZER-CMT1102 | 1 |
| 14 | 2X5 | CN1 | 2X5 | 1 |
| 15 | 4.7K | R2,R3,R4 | RES-TH_BD3.5-L9.0-P13.00-D0.8 | 3 |
| 16 | BT_HC-05 | U4 | BT HC-05 | 1 |
| 17 | POWER | LED1 | LED1206-R-RD | 1 |
| 18 | 2N3904 | Q1 | 2N3904 | 1 |
| 19 | 640 | R18 | RES-TH_BD5.0-L15.5-P19.50-D0.7 | 1 |
| 20 | IR1 | JP1 | B5B-PH-K-S | 1 |
| 21 | L_MOTOR | JP2 | B5B-PH-K-S | 1 |
| 22 | 2PIN | JP3,JP4,JP5 | B5B-PH-K-S | 3 |
| 23 | Header-Male-2.54_1x3 | H2,H3 | HDR-TH_3P-P2.54-V | 2 |
| 24 | arduino_nano | U7 | ADN 2.54 15.24 | 1 |