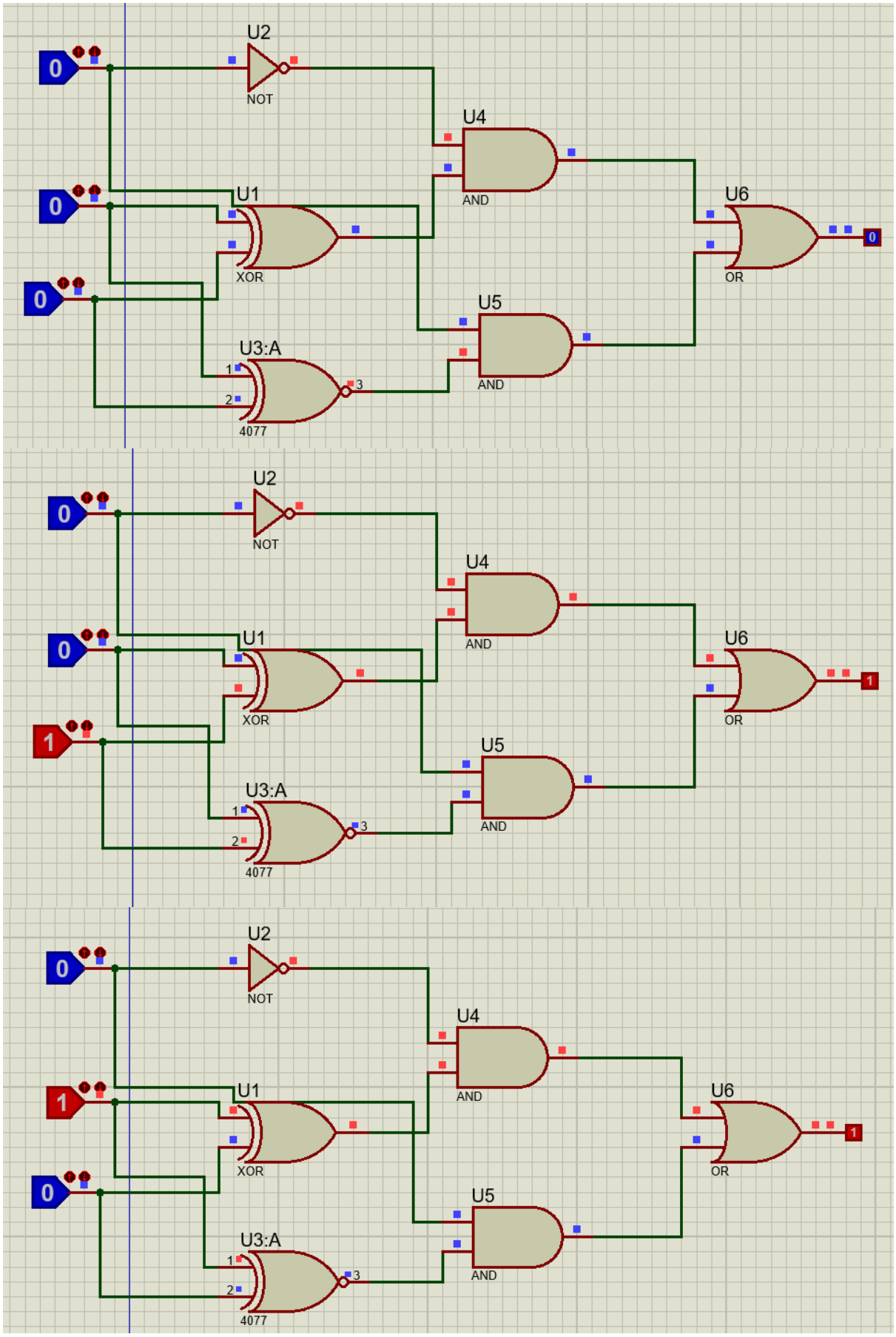
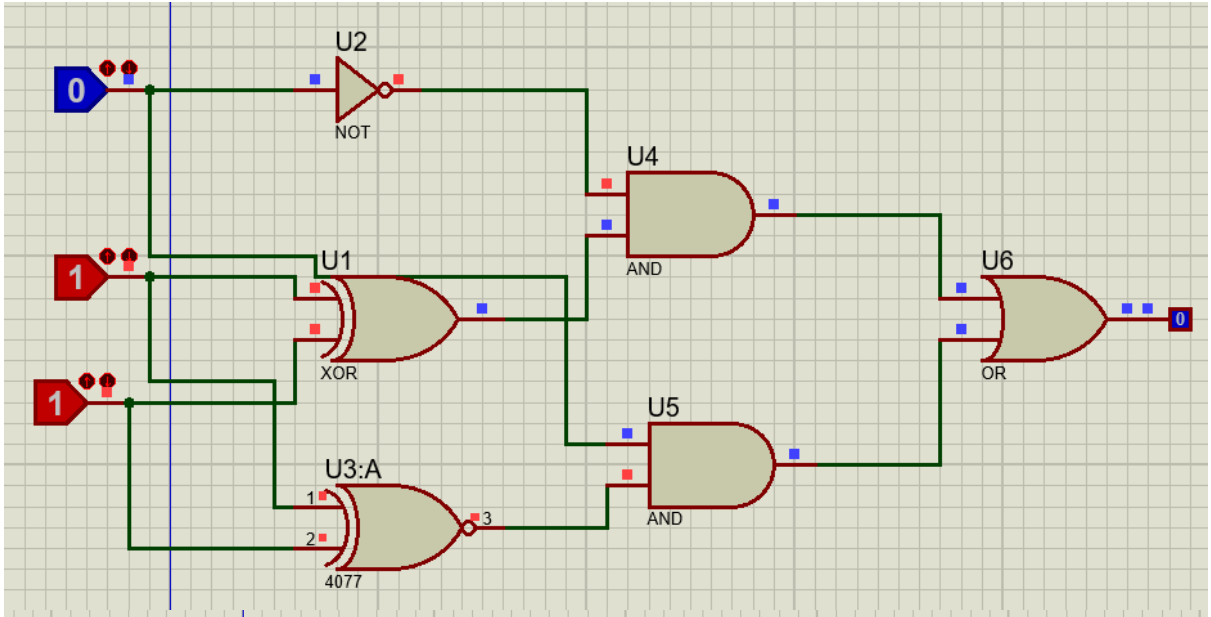
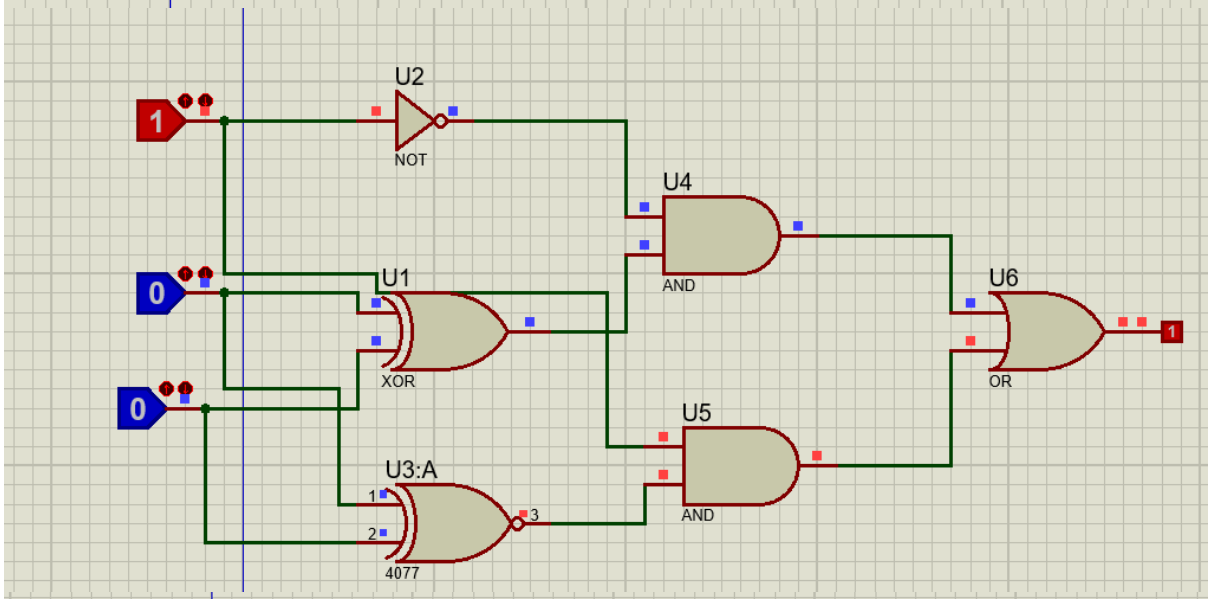
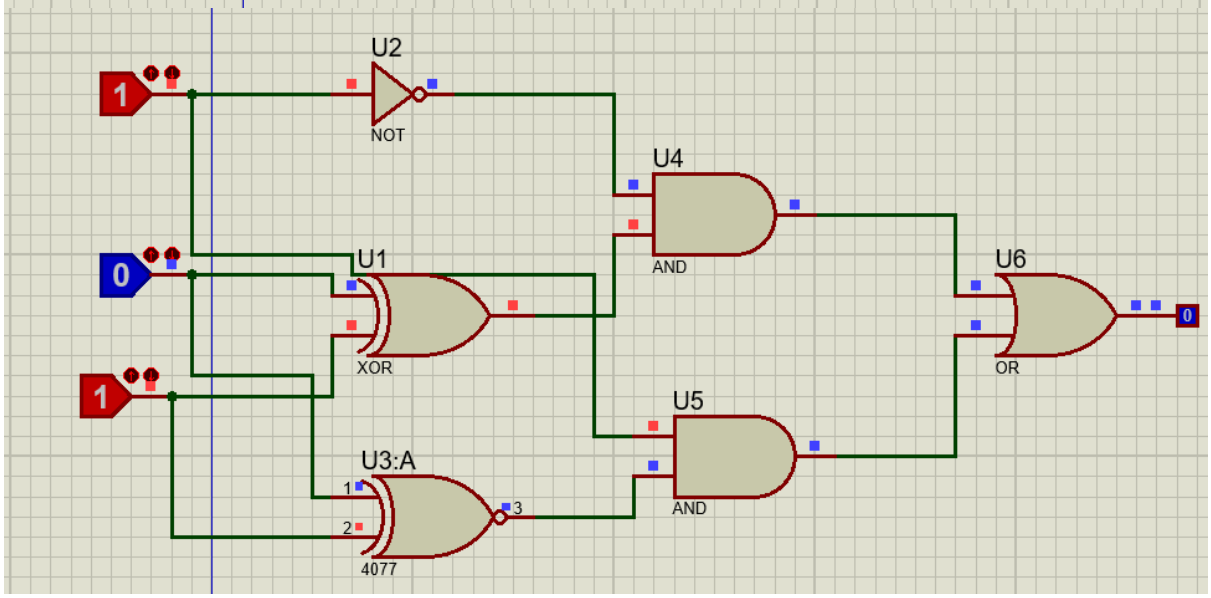
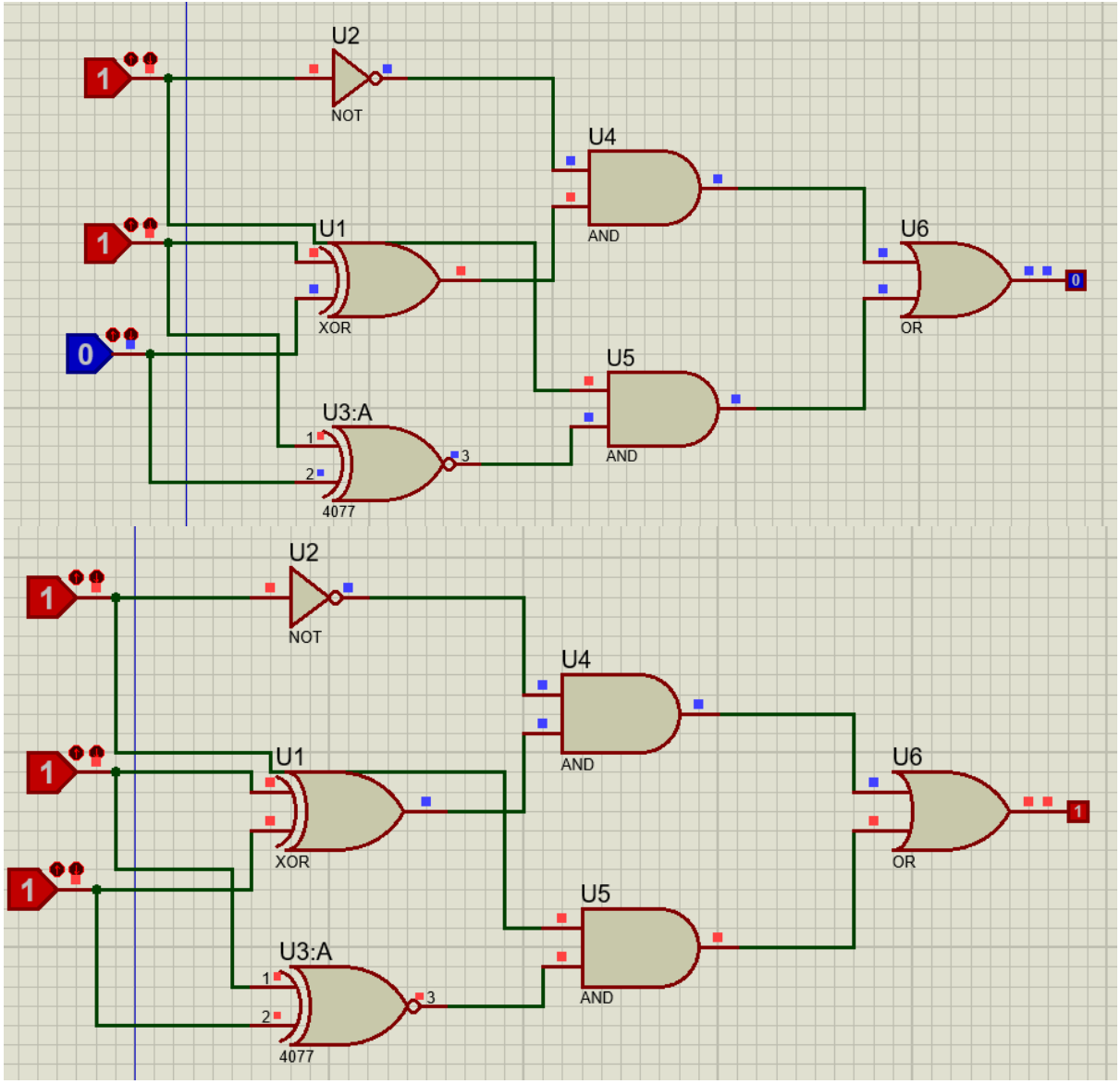
Q1


U2
NOT
U4
AND
U1
XOR
U6
OR
U5
AND
U3:A
4077
0
0
0
1
2
3
U2
NOT
U4
AND
U1
XOR
U6
OR
U5
AND
U3:A
4077
0
0
1
1
2
3
U2
NOT
U4
AND
U1
XOR
U6
OR
U5
AND
U3:A
4077
0
1
0
1
2
3


U2
NOT
U4
AND
U1
XOR
U6
OR
U5
AND
U3:A
1
2
3
4077
0
1
1
0


U2
NOT
U4
AND
U1
XOR
U6
OR
U5
AND
U3:A
1
2
3
4077
1
0
0
1


U2
NOT
U4
AND
U1
XOR
U6
OR
U5
AND
U3:A
1
2
3
4077
1
0
1
0



Q3)

```
const int lightSensorPin = A0;

const int ledPin = 9;

int lightLevel = 0;

const int lightThreshold = 500;


void setup() {

  pinMode(lightSensorPin, INPUT);

  pinMode(ledPin, OUTPUT);

  Serial.begin(9600);

}


void loop() {

  lightLevel = analogRead(lightSensorPin);

  Serial.print("Light Level: ");
```

```
  Serial.println(lightLevel);

  if (lightLevel < lightThreshold) {
    digitalWrite(ledPin, HIGH);
  } else {
    digitalWrite(ledPin, LOW);
  }

  delay(500);
}
```