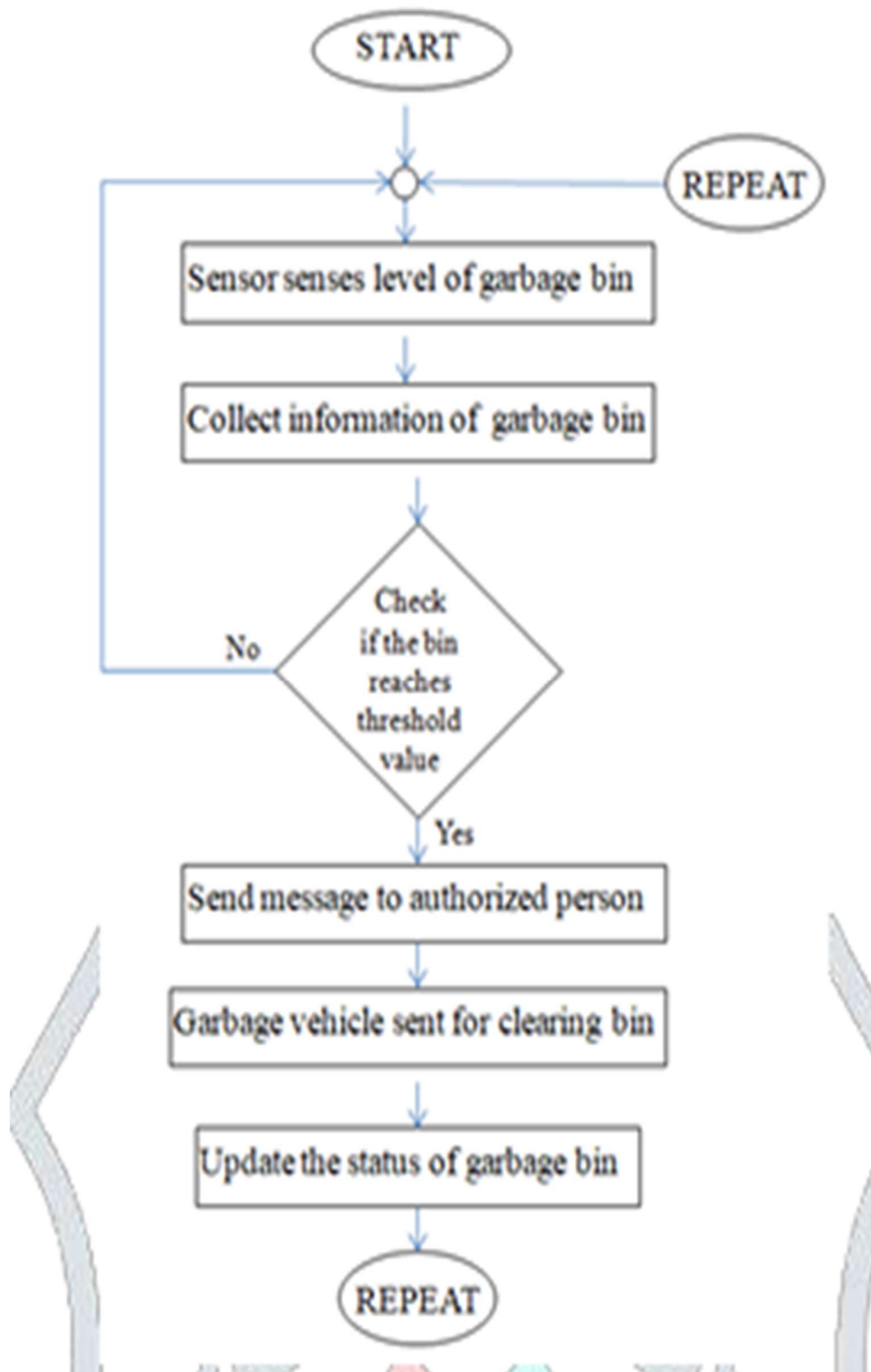


FLOWCHART :



BLOCK DIAGRAM :

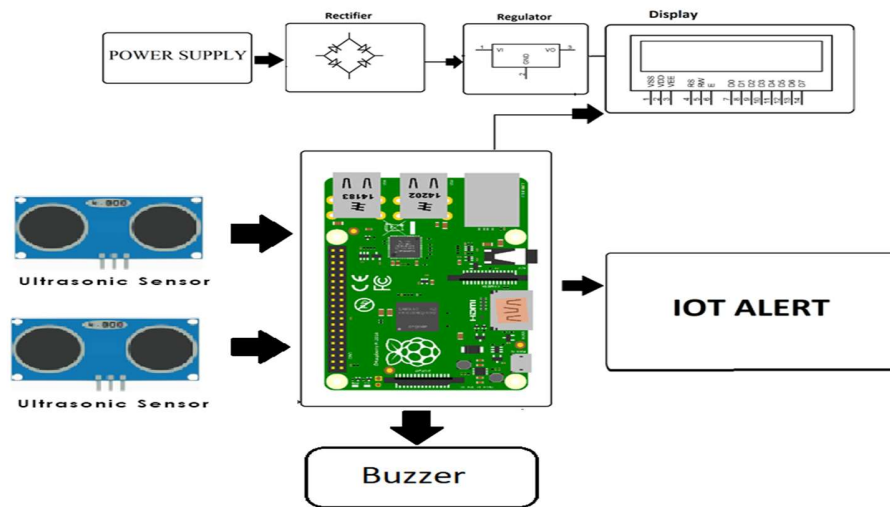
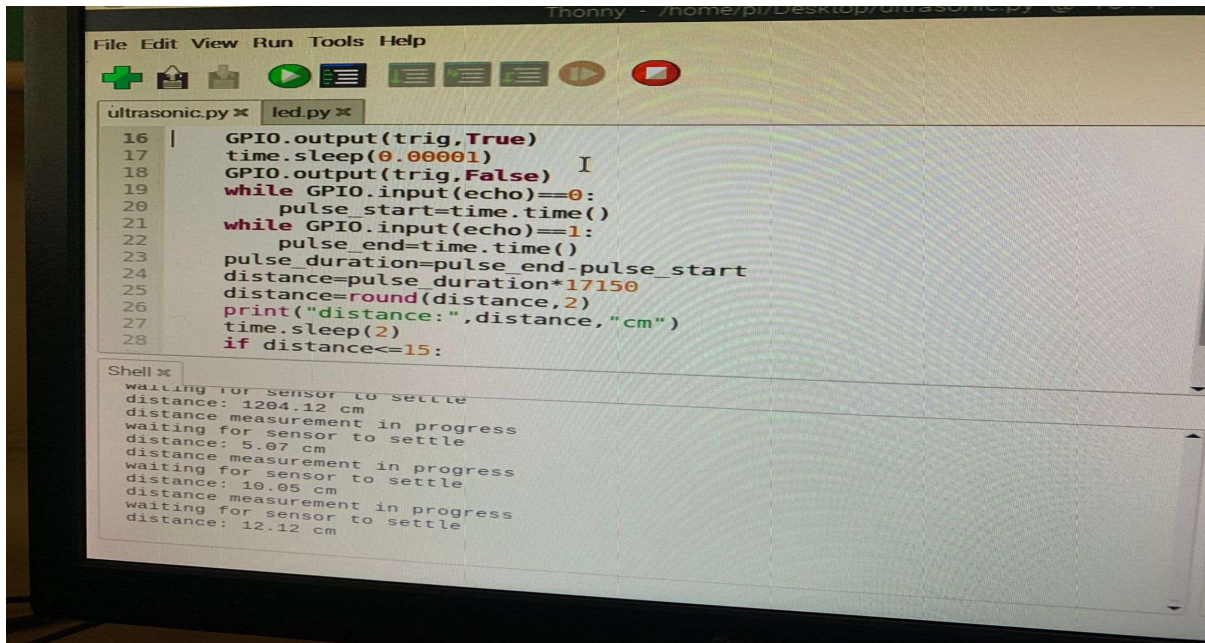


Fig 1:Block diagram of the System design

OUTPUT :



The screenshot shows a Thonny IDE window with two tabs: 'ultrasonic.py' and 'led.py'. The 'ultrasonic.py' tab is active, displaying the following Python code:

```
16 | GPIO.output(trig,True)
17 | time.sleep(0.00001)
18 | GPIO.output(trig,False)
19 | while GPIO.input(echo)==0:
20 |     pulse_start=time.time()
21 | while GPIO.input(echo)==1:
22 |     pulse_end=time.time()
23 | pulse_duration=pulse_end-pulse_start
24 | distance=pulse_duration*17150
25 | distance=round(distance,2)
26 | print("distance:",distance,"cm")
27 | time.sleep(2)
28 | if distance<=15:
```

The 'Shell' tab at the bottom shows the output of the program:

```
waiting for sensor to settle
distance: 1204.12 cm
distance measurement in progress
waiting for sensor to settle
distance: 5.07 cm
distance measurement in progress
waiting for sensor to settle
distance: 19.05 cm
distance measurement in progress
waiting for sensor to settle
distance: 12.12 cm
```

