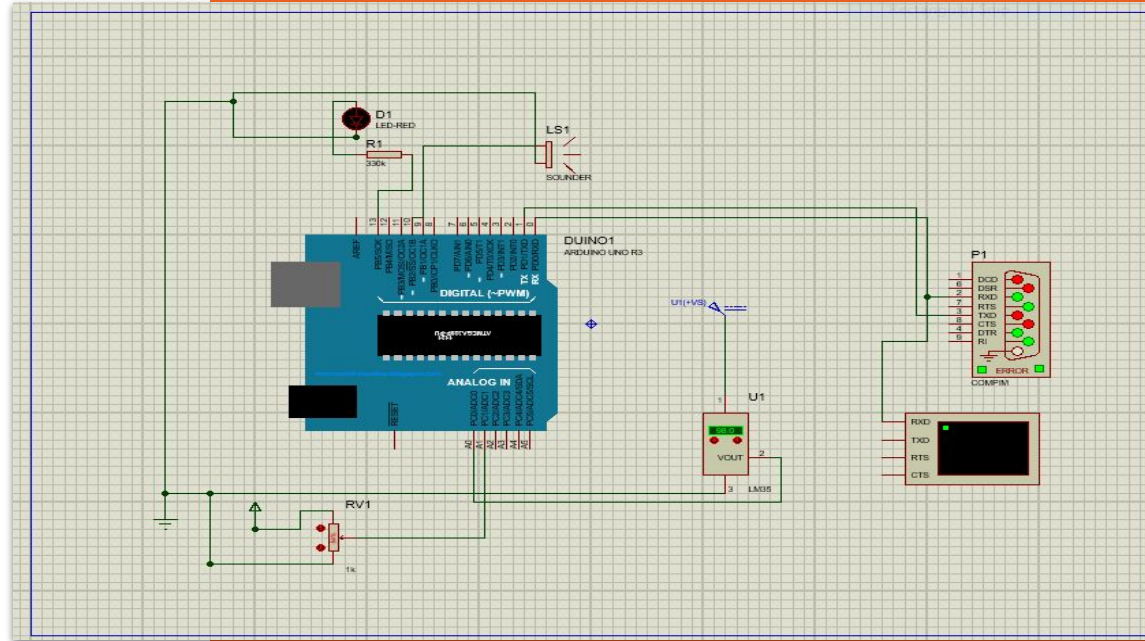

IOT Assignment Vehicle Monitoring

Korukanti Shatrugna Rao 2017A7PS0118P

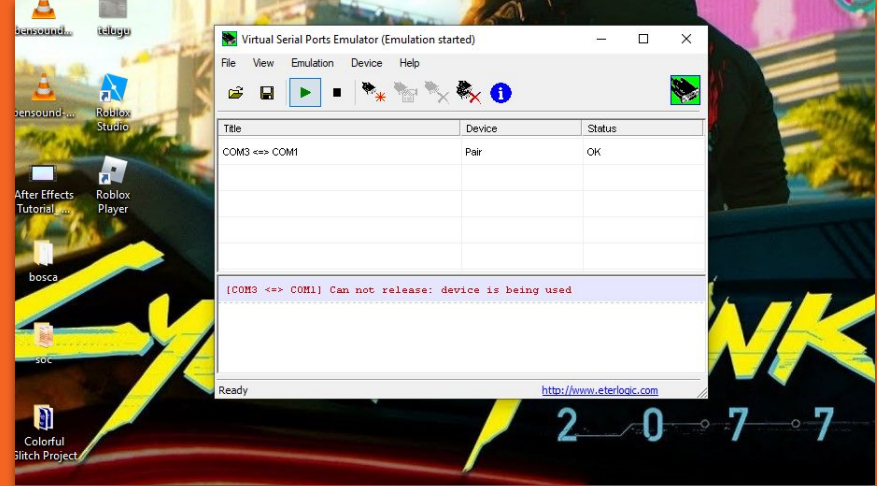
Proteus

No hardware component used,
only simulation is done.



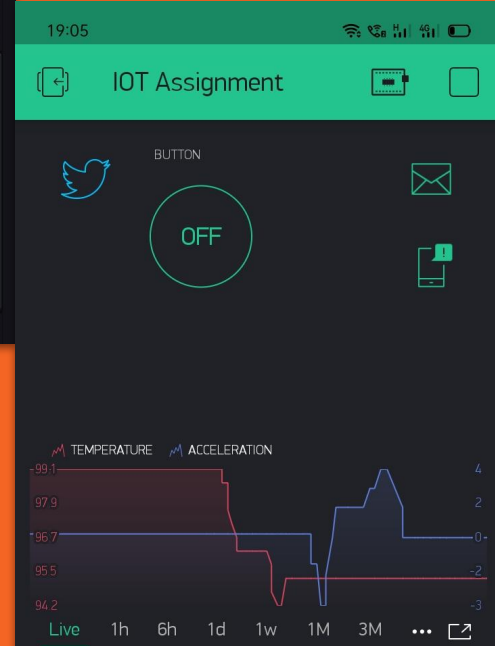
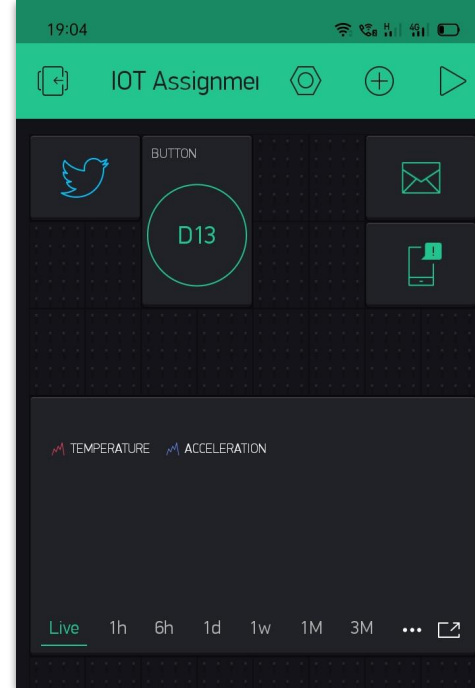
Virtual Port Emulator

It is used to link to proteus which connects to Blynk cloud.



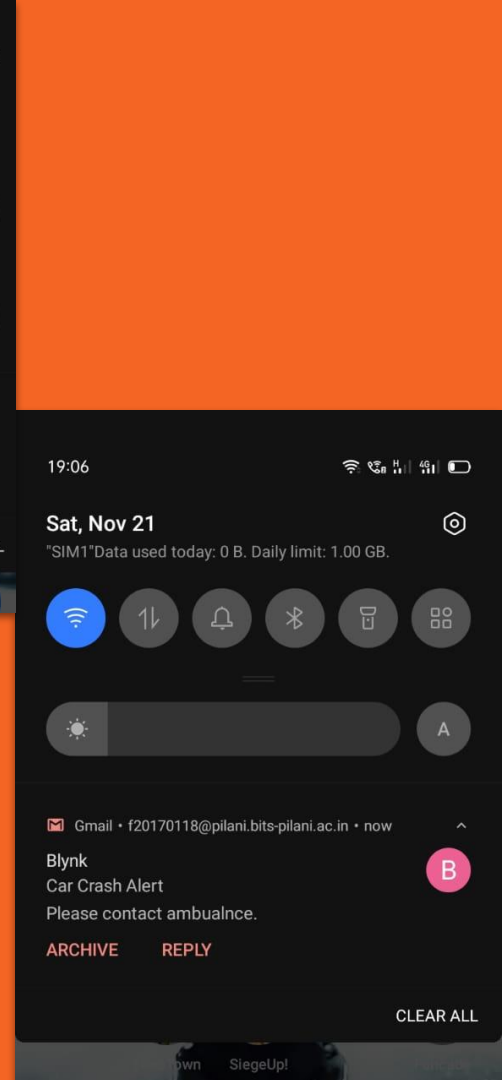
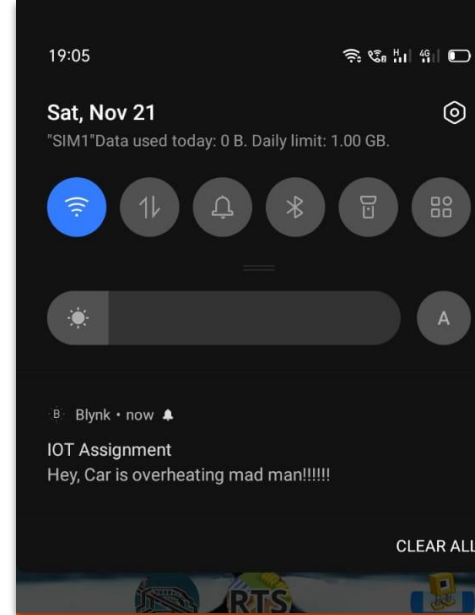
Blynk App

An android app which utilizes api to control and receive data from the arduino connected to the cloud.



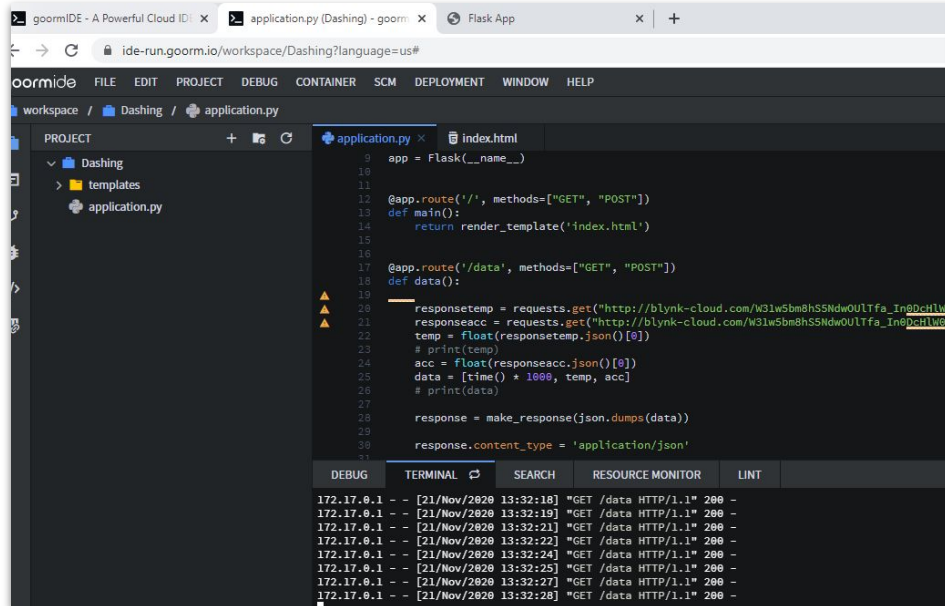
Notifications

It alerts the user if the engine temperature above the tolerable limit and also mails if there is a possibility of car crash by checking the acceleration value. If the value goes too low then it indicates a sudden stopping of the car movement.



Web Server

Created a flask Web Server and hosted on goormide. Utilized Blynk Rest Api to receive values from the cloud.



The screenshot shows the goormide IDE with the following components:

- Project Explorer:** Shows a project named 'Dashing' with a file 'application.py'.
- Code Editor:** Displays the content of 'application.py'. The code is a Flask application that receives data from Blynk Cloud and returns it as JSON.
- Terminal:** Shows the output of the application, displaying the received data as JSON.

```
1  app = Flask(__name__)
2
3  @app.route('/', methods=["GET", "POST"])
4  def main():
5      return render_template('index.html')
6
7  @app.route('/data', methods=["GET", "POST"])
8  def data():
9
10     response = requests.get("http://blynk-cloud.com/W3lw5bm8hSSNdW0UlfFa_In8DcHlw8")
11     responseacc = requests.get("http://blynk-cloud.com/W3lw5bm8hSSNdW0UlfFa_In8DcHlw8")
12     temp = float(response.json()[0])
13     # print(temp)
14     acc = float(responseacc.json()[0])
15     data = [time() * 1000, temp, acc]
16     # print(data)
17
18     response = make_response(json.dumps(data))
19
20     response.content_type = 'application/json'
```

Terminal Output:

```
172.17.0.1 - - [21/Nov/2020 13:32:18] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:19] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:21] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:22] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:24] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:25] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:27] "GET /data HTTP/1.1" 200 -
172.17.0.1 - - [21/Nov/2020 13:32:28] "GET /data HTTP/1.1" 200 -
```

