SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

Team ID	PNT2022TMID11039
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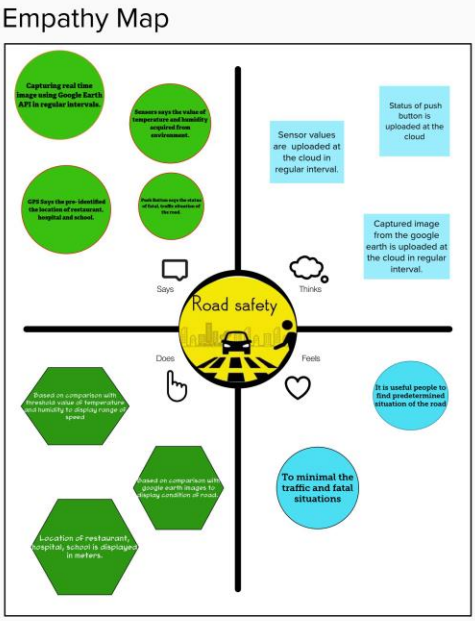
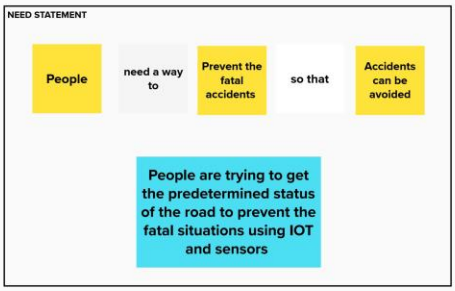
Team Member 1	S.Praveen(811519106104)
Team Member 2	K.Madheshwaran(811519106077)
Team Member 3	B.Prasanna Venkatachalapathi(811519106102)

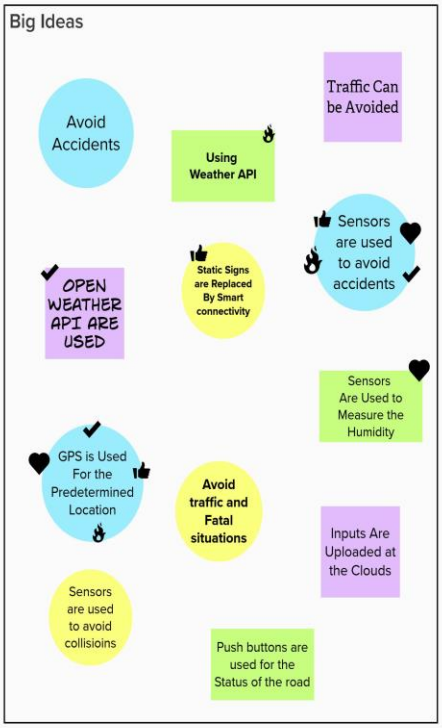
Empathy Map

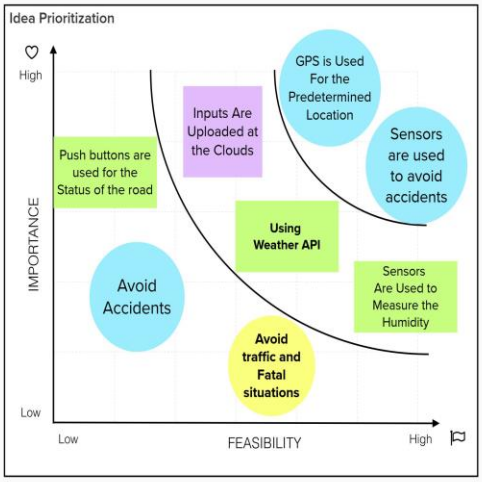
S.NO	NAME	DESGINATION	COLLEGE NAME
1	NANDHAGOPAL S	TEAM LEADER	K. Ramakrishnan College of Engineering
2	PRAVEEN S	TEAM MEMBER 1	K. Ramakrishnan College of Engineering
3	MADHESHWARAN K	TEAM MEMBER 2	K. Ramakrishnan College of Engineering
4	PRASANNA VENKATACHALAPATHI B	TEAM MEMBER 3	K. Ramakrishnan College of Engineering





Big Idea Creation





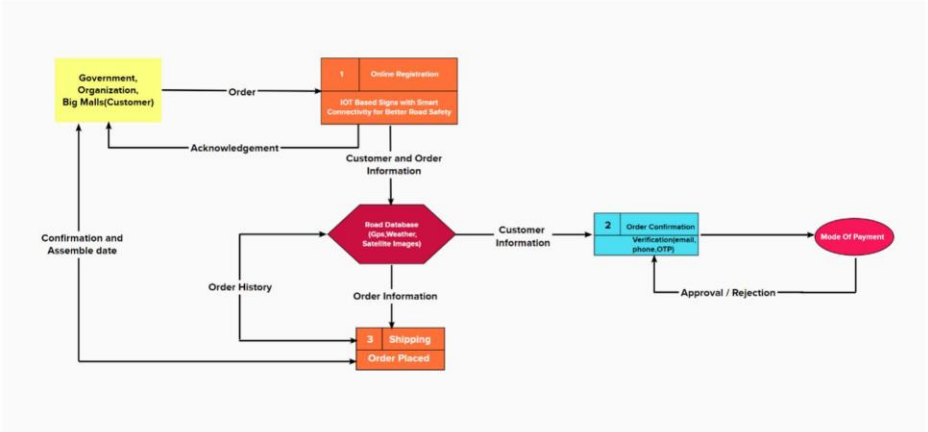
Customer Journey Map

PHASES	Motivation	Information gathering	Analyzes various products	chooses the most efficient product	Payment
Actions	wants to reduce the tension about the road safety	wants to choose an efficient product to get better road safety	Available other products are static boards	Smart boards are more efficient compared to static board	After the product satisfication
Touchpoints	The buyers feel excited	After installation, the government no need to worry much about the road safety	The user amuse by the various types of product available.	After getting this the government won't worry about the safety	After find the product worthy, the government get's it.
Customer Feeling	☺	😵	☺	☺	☺
Customer Thoughts	Customer thinks it will helpful for better status of road condition	Customer thinks it will leads long duration	Customer thinks alter solution will be available	The product choosing will be easy and comfortable for them	They think the product will be user friendly
Opportunities	The customer gets the better road safety	The customer known about the process of product	The customer will be aware of other product	The customer comes to know which product is best one	The customer will enjoy the journey

Project Design Phase-II
Data Flow Diagram

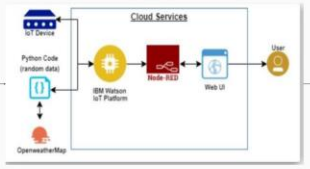
Date	12 October 2022
Team ID	PNT2022TMID11039
Project Name	Signs with smart Connectivity for Better Road Safety
Maximum Marks	4 Marks

Data Flow Diagram



Technology Architecture

Status about the road and weather



Cloud processing using python code

The user can see the road condition and weather condition in smart board

Milestone & Activity List	
DATE	28/10/2022
TEAM ID	PNT2022TMID11039
PROJECT NAME	Signs with smart connectivity for better road safety

IBM Cloud Services: (Aug 22-Sep02)
Among all the IOT product development stages cloud services is an importantstage for building the best IOT product.The development team is responsible forbuilding web and mobile based applications for control in the functionality ofproducts in real time.

Open Weather Map :(Sep 05-Sep 10)
The Open Weather Map is a service that provides weather data,including current weather data,forecasts,and historical data to the developers of web services and mobile applications.We analyzed the behaviour of the metrics forthe open weather map model.

Node-Red:(Oct 1-Oct 11)
Node-Red is a programming tool for wiring together hardware devices, API and online services in new and interesting ways. It provides a browser-Based editor that makes it easy to wire together flows using the wide range of nodesin the palette that can be deployed to its run time in a single -click.

Python Script:(Sep 20-Sep 27)
The primary objective of running python on an IOT device that pops up in mind is grabbing the Arduino UNO from the table. Python is pre-installed inthe operating system,and the only objective left for us is to write the codingscript.

Sensor :(Sep 10-Sep 17)
The Navigational sensor provides a precise geo-spatial orientation of the vehicle as well as trends in driving behaviour. The ODAWS algorithm is used tointerpet sensor data and offer real -time notifications to the driver ,boosting road safety .

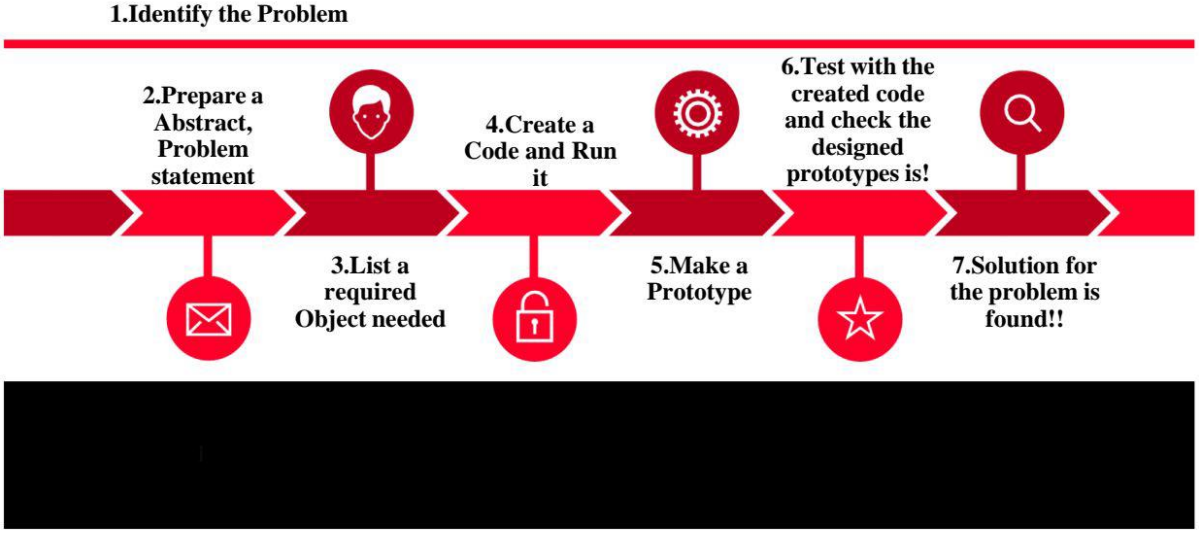
Product Hardware Identification:
Product Hardware Identification is one of the most important parts of IoT product development stages.The development team with great and in-depthknowledge of diverse types of IoT boards,sensors and connector devices willget a huge success in IoT product development.

Application:
A traffic signal is used as an instruting device that indicates the road user to actaccording to the displayed sign. Sensors installed in strategic locations can use IoT technology to collect data oncongestion, moving vehicles away from these locations. IoT Big Data solutions cananalyze this information, determine alternative routes, and improve traffic signaling to reduce congestion.

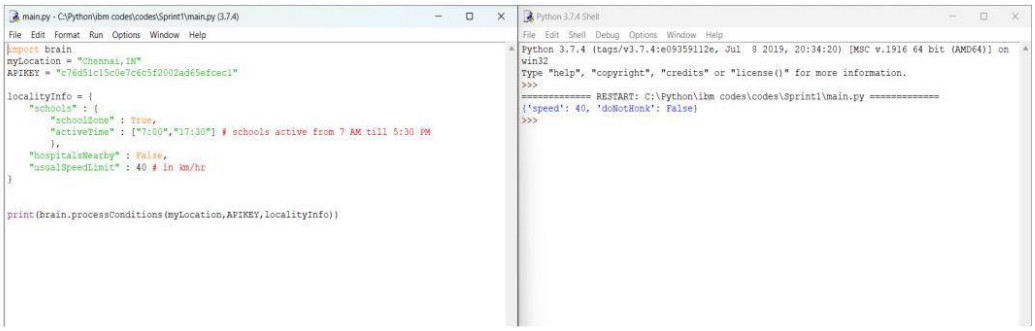
Final Deliverables : (Oct 25-Nov 15)
Our project Signs with smart connectivity for better road safety in the domain
of internet of things (IOT) will soon prove its potential in vehicle maintenance , navigation, monitoring leading to improve transportation on the given sprint delivery plan by using our followed task and assignments like Arduino UNO, IBM cloud services, Open weather map, Node-red, Python IDLE, sensor

TOPIC	SPRINT PLAN
TEAM ID	PNT2022TMID11039
PROJECT NAME	Signs with Smart Connectivity for Better Road Safety
DATE	29-OCT-2022

SPRINT PLAN



Date	17 NOV 2022
Project Name	Signs with smart connectivity for better Road Safety
Team ID	PNT2022TMID11039



Date	18 NOV 2022
Project Name	Signs with smart connectivity for better Road Safety
Team ID	PNT2022TMID11039

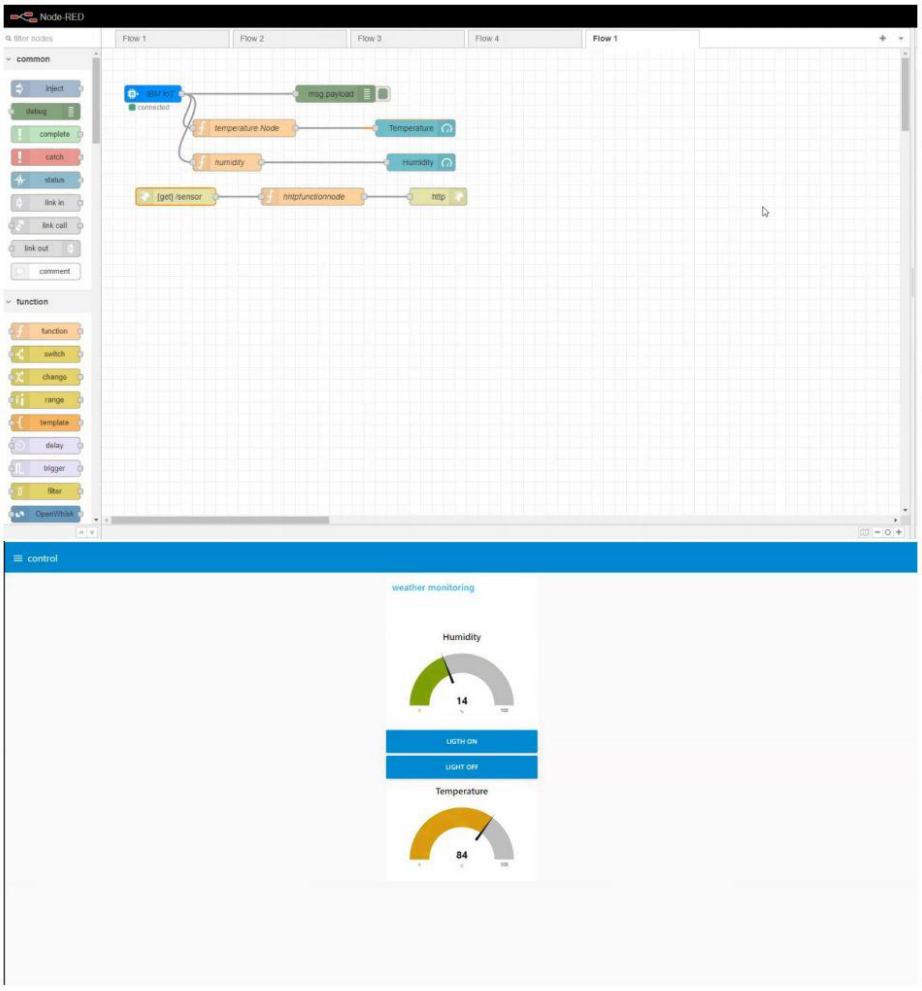
Code:

```
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json
myConfig = {
#Configuration
"identity": {
"orgId": "ju7btr",
"typeId": "12345",
"deviceId":"13555544"
},
#API Key
"auth": {
"token": "_iMxKSQagd4LjoqNLZ"
}
}
#Receiving callbacks from IBM IOT platform
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
    client.connect()
```

#PUBLISHING TO IOT WATSON

```
print("Published data Successfully: ", myData)
print("")
    #client.commandCallback = myCommandCallback
    #time.sleep(5)
    #client.disconnect()
```

OUTPUT


Node-RED
Flow 1
Flow 2
Flow 3
Flow 4
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
template
delay
trigger
filter
OpenWhisk
IBM IoT
connected
msg.payload
temperature Node
Temperature
humidity
Humidity
[get] /sensor
nntpfunctionnode
http
control
weather monitoring
Humidity
14
LIGTH ON
LIGHT OFF
Temperature
84

FINAL APP

Date	17 NOV 2022
Project Name	Signs with smart connectivity for better Road Safety
Team ID	PNT2022TMID11039

Login Page

Output Screen:

DEMO VIDEO LINK:

https://youtu.be/UBxy0TYSP_E