

# TRAFFIC MANAGEMENT SYSTEM



# ABSTRACT:

- With cities worldwide experiencing ongoing population growth – it results in stressed municipal infrastructure
- The increasing growth in cities leads to the demand to meet sustainability goals while evaluating traffic management strategies.
- IOT enables to, Optimize the traffic flow and keep the drivers safe.
- Collect data on congestion and improve traffic signaling.  
Locate incidents and report them to emergency rooms immediately with road sensors.



# ADVANTAGES:

Few benefits of implementing Iot and intelligent technology:

- 1)Reduce traffic jam
- 2)Reduce accident on street.
- 3) Ensuring immediate clearance for emergency vehicle.
- 4)Saving billions of gallons of fuel wasted every year.

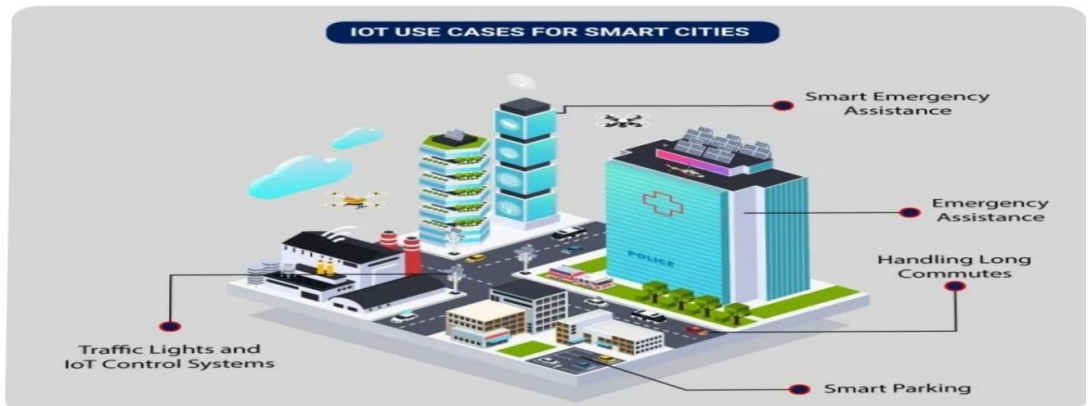


# APPLICATION:

Use cases:

1) Traffic lights and IOT control systems

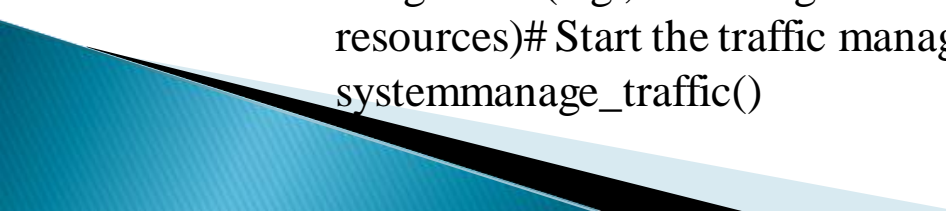
2) Smart parking.



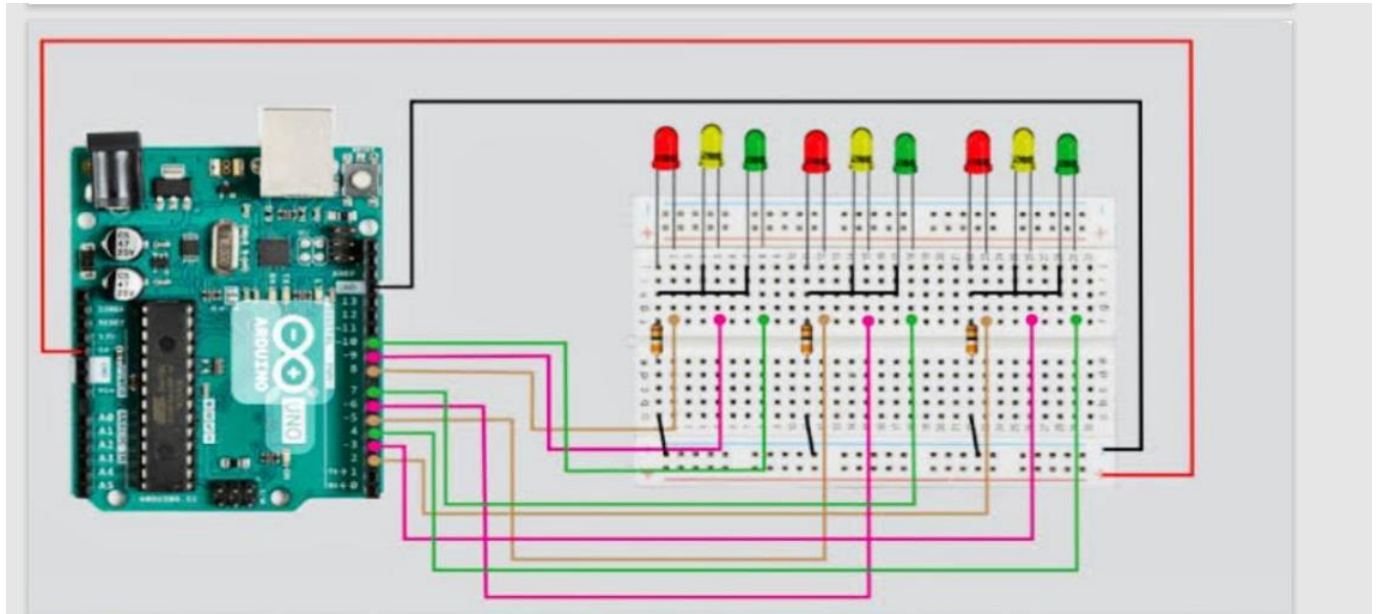
## CODING:

Sure! Here's a simple Python script for traffic management:

```
``pythonimport time
def manage_traffic():
    while True: # Check traffic conditions
        traffic_condition = check_traffic()
        if traffic_condition == "low": # Allow smooth flow
            allow_flow()
        elif traffic_condition == "medium": # Implement traffic control measures
            implement_control()
        elif traffic_condition == "high": # Manage congestion
            manage_congestion()
    # Wait for a certain interval before checking traffic again
    time.sleep(5)
def check_traffic(): # Code to check traffic conditions (e.g., using sensors or d())
def allow_flow(): # Code to allow smooth flow of traffic (e.g., adjust traffic signal timings)
def implement_control(): # Code to implement traffic control measures (e.g., lane closures or speed limit adjustments)
def manage_congestion(): # Code to manage congestion (e.g., rerouting vehicles or deploying additional resources)
# Start the traffic management system
manage_traffic()
```



# CONNECTION DIAGRAM:



## CONCLUSION:

In conclusion, the traffic management project utilizing IoT technology aims to improve traffic flow, reduce congestion, and enhance safety on the roads. By implementing IoT sensors and devices, real-time data can be collected and analyzed to gain insights into traffic patterns and conditions. This data-driven approach enables informed decisionmaking for optimizing traffic control measures such as signal timing adjustments and dynamic signage. The development process involves setting goals, collecting and analyzing data, implementing measures, creating a user-friendly interface, testing and refining the system, and deploying it for continual monitoring. Through this project, we can work towards more efficient and reliable traffic management that benefits both drivers and pedestrians.

