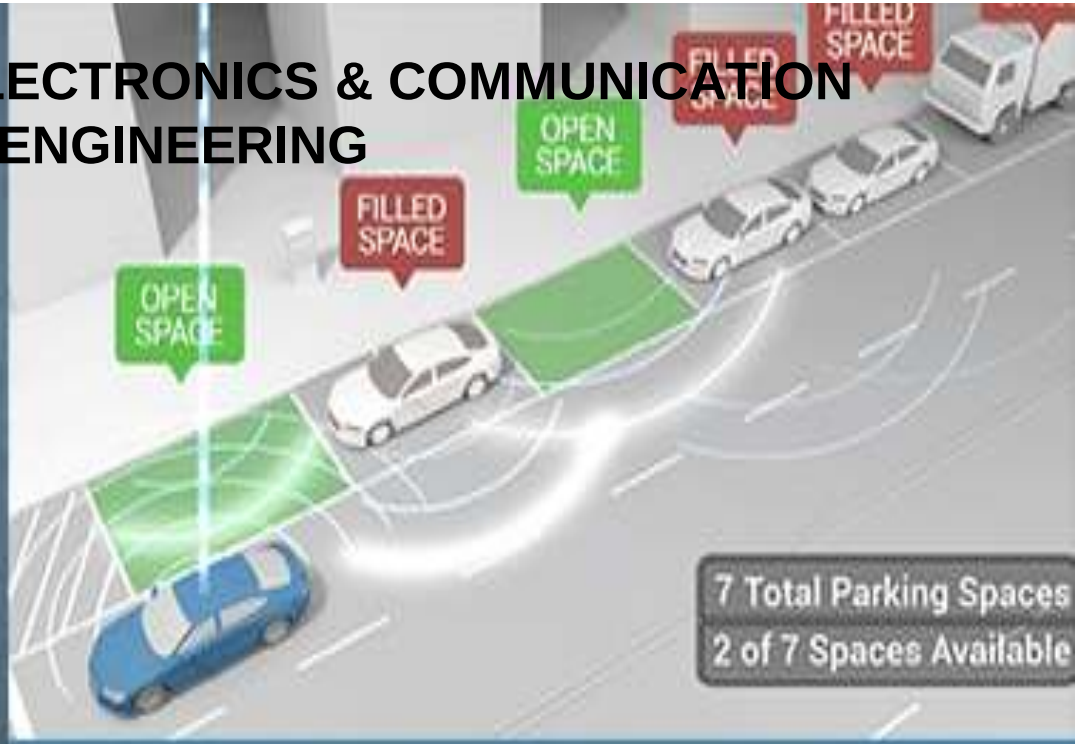
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

IoT Based Smart Parking Systems for Smart Cities

S.vivek
B.E..,ECE



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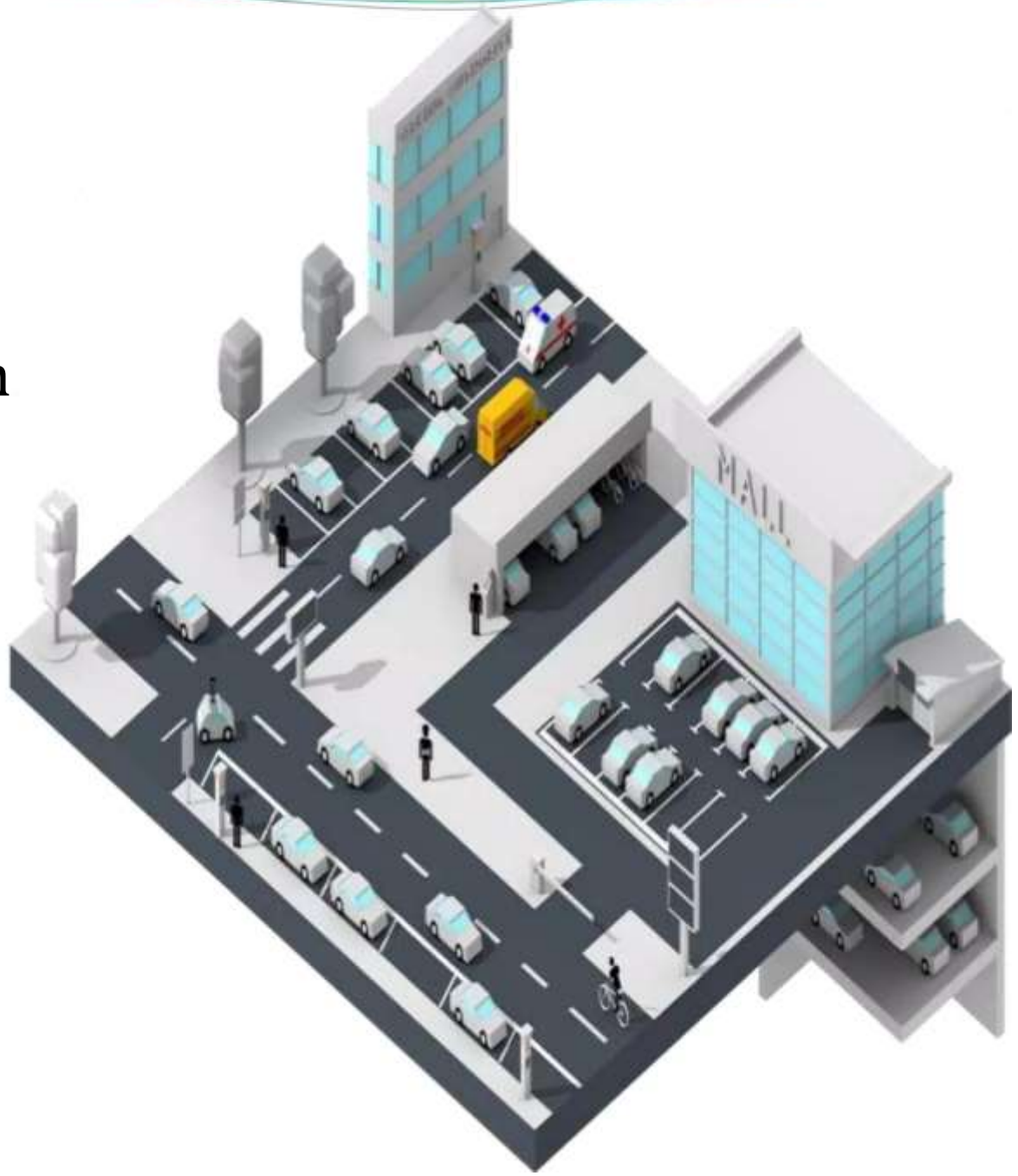


What is a IoT ?

The Internet of Things (IoT) is the network of physical objects or "things" embedded with electronics, software, sensors, and network connectivity, which enables these objects to collect and exchange data.

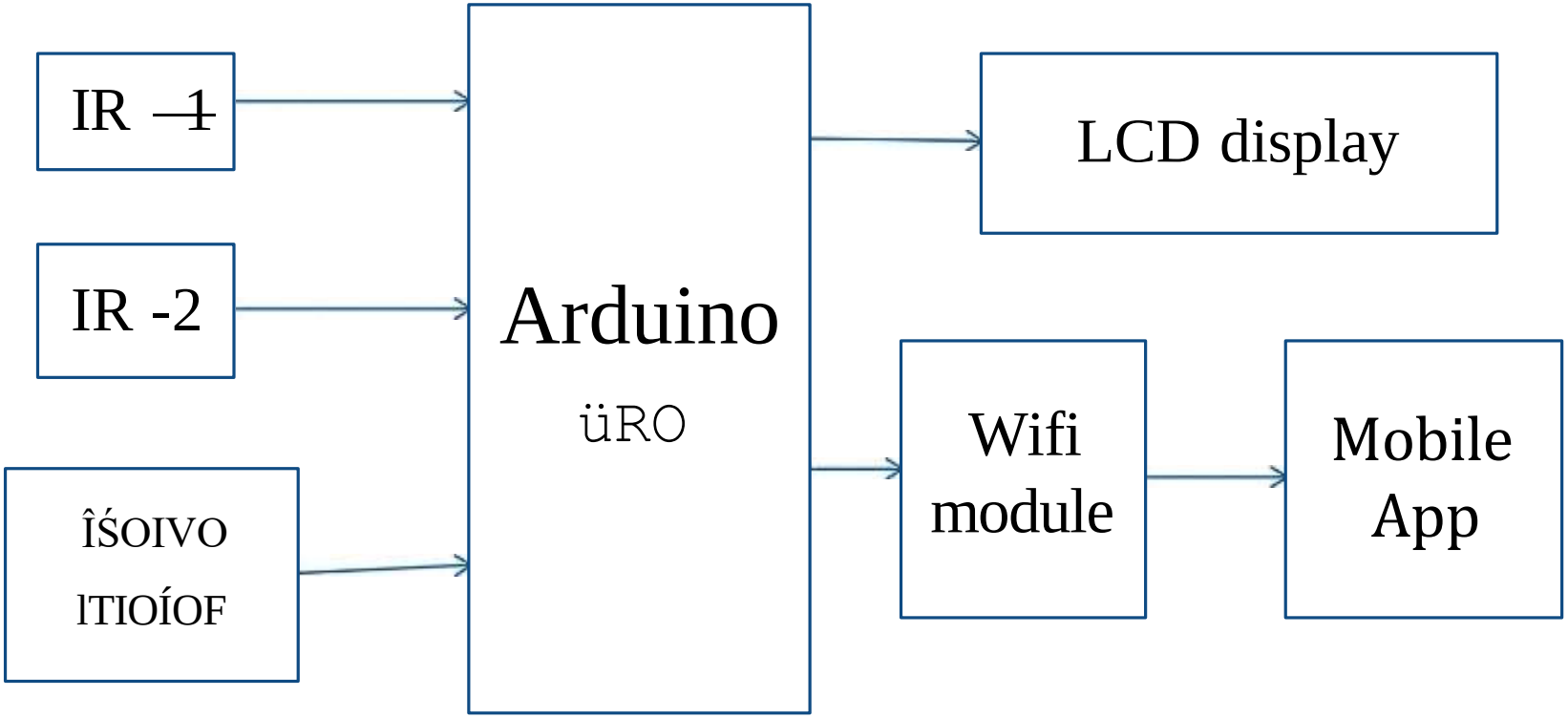
What is smart parking

- An IoT based smart parking system, also known as a connected parking system, is a centralized management system that allows drivers to use a smartphone app to search for and reserve a parking spot.

Why it is needed

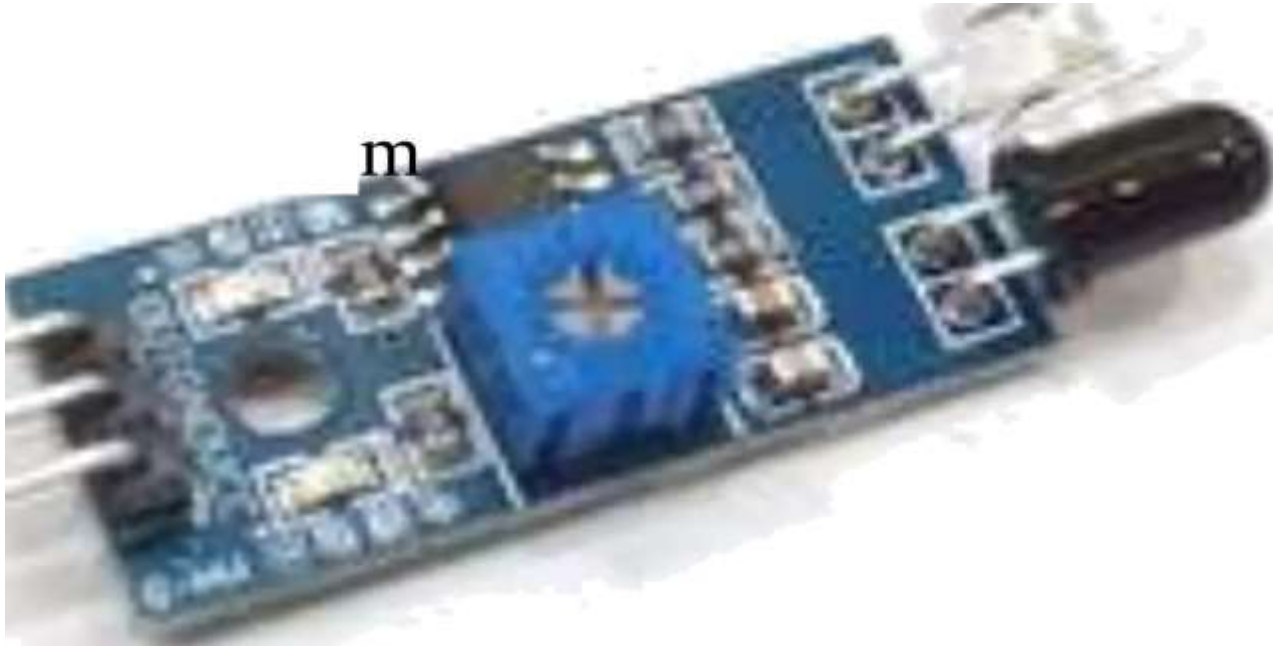
- People cannot find parliing in popular places. Especially during holidays, traffic is always bad.
- People cannot locate their car in large parliing slots

Block diagram:

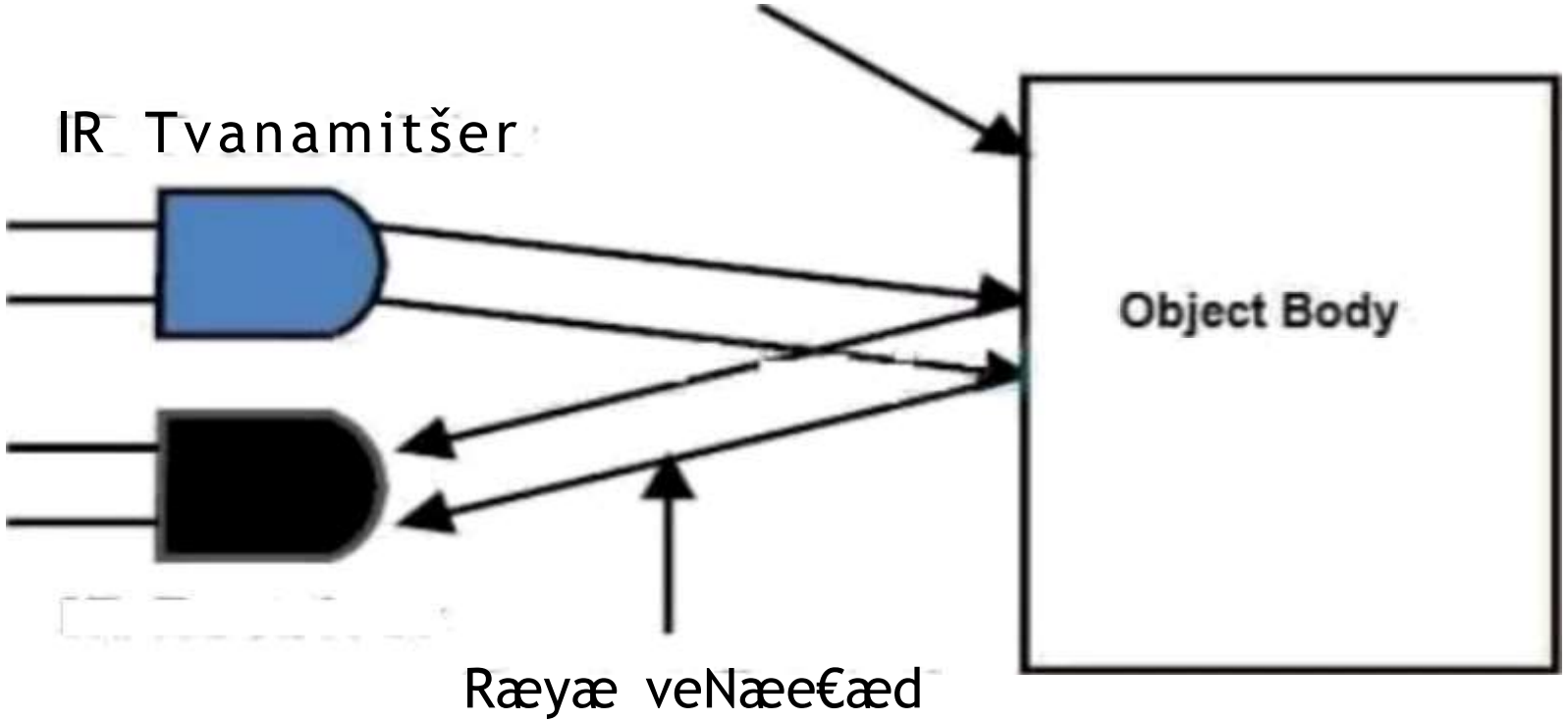


IR sensor:

- 3V to sv power supply
- Current •3•=* tO 43*^'"*
- Range is zcm tO 3°fi



Operation of IR sensor



Arduino uno:

Advantages-

- Shorter waiting time
- Saves fuel
- Guided to nearest place
- Reduce carbon emission

Conclusion:

- The system benefits of smañ parking go well beyond avoiding time wasting.
- Developing a small parking solutions with in a city solves the pollution problem.
- IoT-based parking systems are able to better track the availability of parking spots on a given lot, making it easier to find an available parking spot.

Applications

The small car parking system can be implemented in Shopping malls

- Restaurants
- Theatres

Futurescope

The future of the smart parking system is expected to be significantly inñuenced by the arrival of automated vehicles (AVs). Several cities around the world are already beginning to trial self-parking vehicles, specialized AV parking lots, and robotic parking valets.


THANK
YOU