# BVRIT HYDERABAD
# College of Engineering for Women
## Department of Information Technology
### Mini Project - Academic Year 2022-23

TEAM 20

# ARDUINO CAR PARKING SYSTEM

## Abstract

Addressing the prevalent issue of inefficient car parking systems, a solution involves implementing infrared transmitters and receivers in each lane, coupled with LED displays at the entrance. This automated system guides drivers by directly indicating vacant parking slots, reducing the need for manual search and associated labor costs. The LED display at the entrance showcases real-time availability for all parking slots and lanes. The gate opens only when empty spaces are detected, enhancing efficiency. The system utilizes intelligent monitoring to optimize parking, minimizing congestion and streamlining the process for drivers.
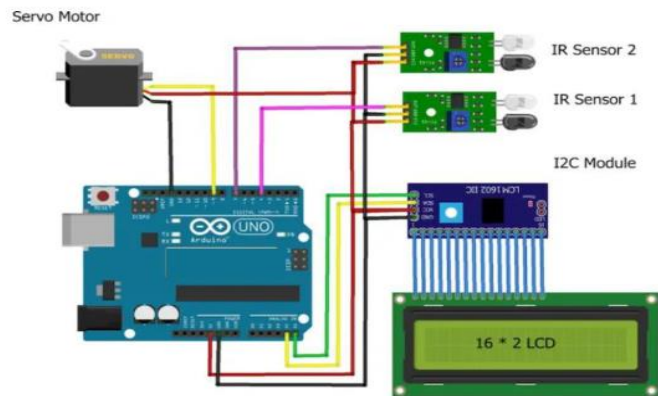
## Components

- **Arduino Uno**
- **I2C Module**
- **Servo Motor**
- **16x2 LCD**
- **IR Sensors**
- **Power Supply**



## Conclusion and Future Scope

This automated car parking system significantly improves efficiency and reduces manual effort. Future enhancements could integrate smart technologies such as machine learning for predictive parking slot availability, further optimizing the user experience. Additionally, incorporating app-based features for real-time updates and remote monitoring could enhance accessibility and convenience for users. Expanding the system to accommodate electric vehicle charging stations aligns with evolving automotive trends, ensuring adaptability to future needs.

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## Github links

1. https://github.com/20WH1A1267- arduinocarparkingsystem
2. https://github.com/Amulya0929-arduinocarparkingsystem
3. https://github.com/21wh5a1212-arduinocarparkingsystem