

Automatic Car Parking System



Presented By



Hridita Barua

20200104052



Jannatul Maowa
Ahona

20200104055



Arif Rayhan
Pran

20200104058



Mymona
Akter

20200104069



Sowpnil Roy

20200104071

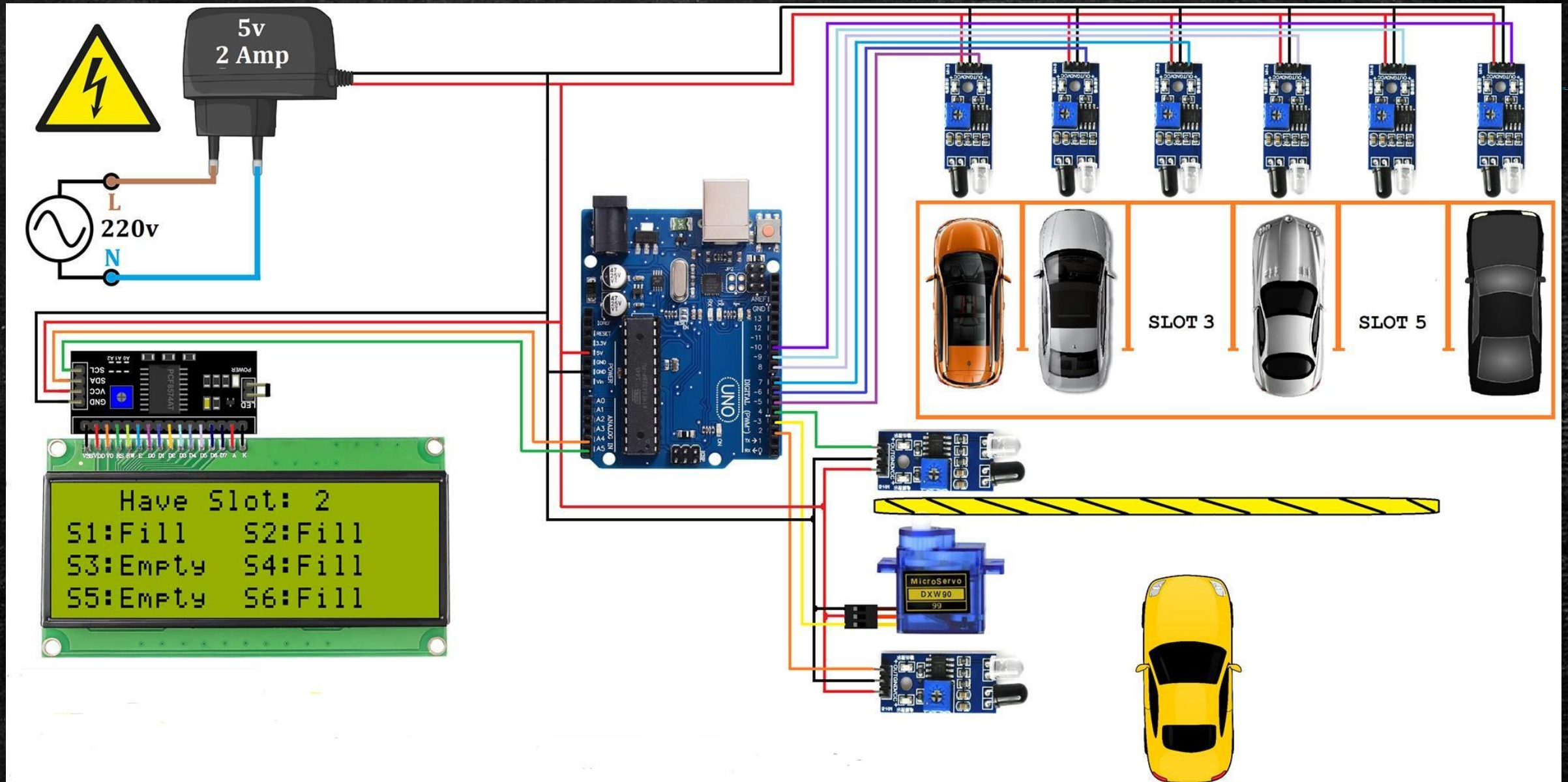
❖ **ABSTRACT**

- ❖ In this Arduino based project we will implement a smart car parking system. It can be concluded that with the correct connection of some simple electrical components, it is possible to create an automatic car parking system, thus decreasing aimless driving, saving our time, as well as making the process of parking simple. This system will ensure the safety of the vehicles. Our users can make their vehicles safe & secure by using this system.

❖ SOCIAL VALUES

- ❖ Our traffic is increasing day by day. If we can implement this project, we will be able to easily park many cars in less space and it will be easier to ensure the safety of our vehicles. This project will make our life easier. This is very affordable. Project management costs are also very low. Anyone can use it easily.

CIRCUIT DIAGRAMS



❖ Equipment List

- 1) Arduino UNO
- 2) Alphanumeric LCD Display 20*4
- 3) Arduino LCD Display 16*2
- 4) IR Range Sensor 8
- 5) Micro-Servo Motor
- 6) Connector Adapter DC Power 2.1 mm
- 7) Digital 5v 2A Switching Power Supply
- 8) Breadboard
- 9) Necessary wires & Others
- 10) Hard Board

❖ Arduino UNO

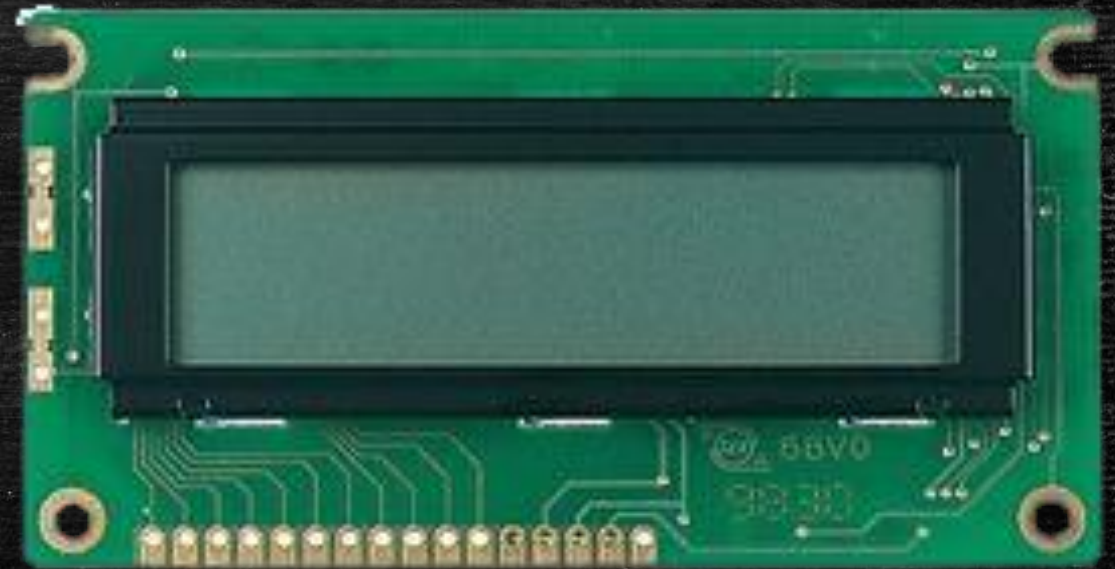
- ❖ The **Arduino Uno** is an open source microcontroller board based on the Microchip at mega 328P microcontroller and developed by Arduino.
- ❖ This system is capable of finding the empty slots that are available for parking automatically. If the slot is empty in the automated car parking the new vehicles are allowed to enter the parking else the entrance is blocked by using Arduino UNO.



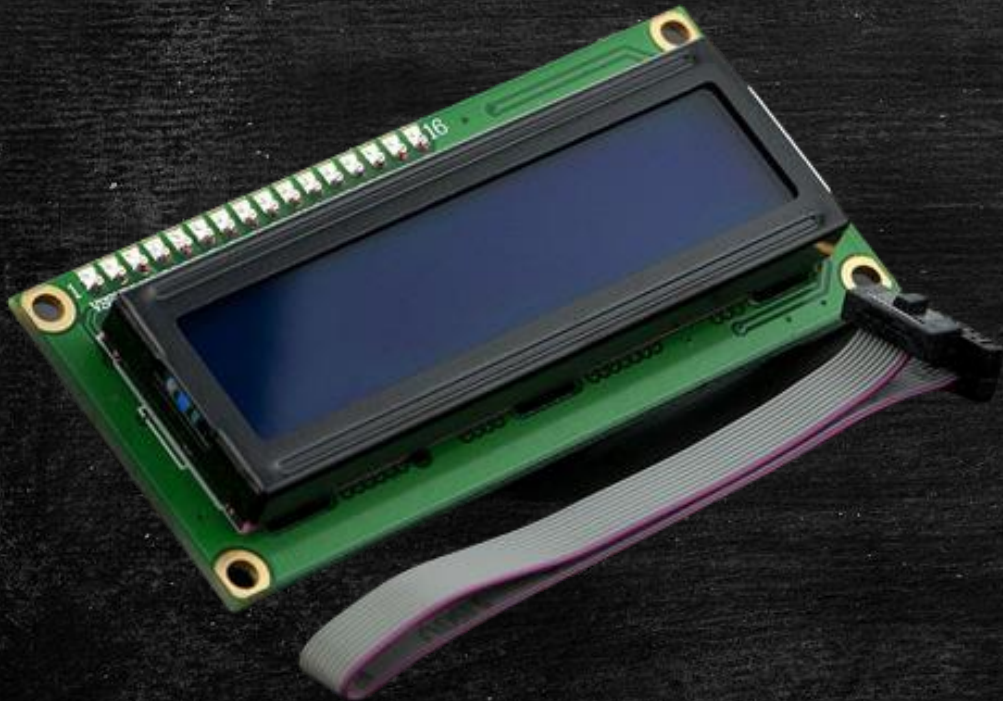
❖ Alphanumeric LCD Display 20x4

Raystar provides various LED backlight combinations for RC2004B 20x4 LCD module, such as yellow-green and white. You can choose module with LED backlight or without it.

LED backlight can be driven
By PIN1, PIN2, PIN15, PIN16 or
A and K.



❖ I2C 16x2 Arduino LCD Display Module



❖ To display the parking status we are using a
I2C 16x2 Arduino LCD Display Module

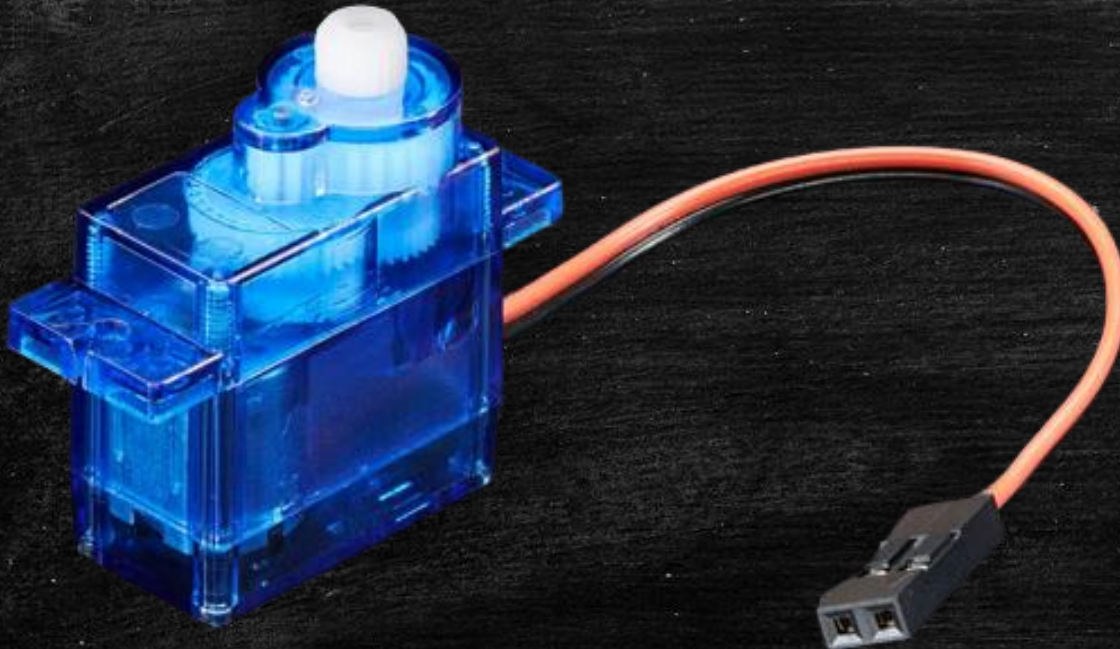
❖ IR Sensor

- ❖ For detecting the movement of vehicles, we are using the IR sensors



❖ Servo Motor

- ❖ Servos are mainly used on angular or linear position and for specific velocity, and acceleration.



❖ Connector Adapter

- ❖ Connectors and adapters enable you to stream data into or out of an event stream processing engine.



❖ 5V 2.5A Switching Power Supply

- ❖ A power supply is an electrical device that supplies electric power to an electrical load. The main purpose of a power supply is to convert electric current from a source to the correct voltage, current, and frequency to power the load.



❖ *Estimated Budget*

No of Equipment	Necessary Equipment	Budget
1	Arduino Uno	1450
2	Alphanumeric LCD Display 20*4	650
3	Arduino LCD Display 16*2	500
4	IR Range Sensor 8	1000
5	Micro-Servo Motor	200
6	Connector Adapter DC Power 2.1 mm	300
7	Digital 5v 2A Switching Power Supply	250
8	Breadboard	150
9	Necessary wires & Others	550
10	Hard Board	200
Total		5150



Mr. Farzad Ahmed
Lecturer
CSE, AUST



Ms. Ashna Nawar Ahmed
Lecturer
CSE, AUST



Any Questions???



**Thank
You!!!**