NORTH SOUTH UNIVERSITY

Center of Excellence in Higher Education

The first private university in Bangladesh

Project Proposal

Automated Car Parking System

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1. Introduction

Parking automobiles in parking spaces, manual procedure is being used. Which most of the cases is unplanned and lack of discipline due to this, people can park their car anywhere they want to, which creates a mess as people do not follow the particular cue most of the time. As a result of this a huge traffic jam takes place. While parking in and retrieving car due mismanagement cars can get dent by getting bumped with each other due to lack of space. Traffic jam is an issue here as it kills our precious time. Due to this chaos in parking our valuable time gets wasted. It harms the students, office going staffs and emergency patients to a great extent.

2. Purpose

Our goal is to bring a better and a convenient system in the car parking.

- There will be a car parking map drawn in front of the entrance gate.
- The map will include LED lights to indicate if there is parking available or not.
- Drivers will be able to locate and choose their desired car parking space very easily with the indication.

3. Description

- There will be two sensors. One is to the entrance of the parking area and the other beneath the car entrance barrier.
- The barrier will be regulated by a motor.
- The IR sensor will detect the number of cars entered the parking which will be recorded in Arduino.
- This will keep a record of how many cars have entered and how many empty spaces are left.
- As soon as the parking is full, the barrier will not open and it will ring the buzzer that will indicate that the parking is full.

4. Components & Cost

For making this project, below components will be needed.

Serial	Components Name	Amount	Cost of Components
1.	Arduino Uno	x1	500 BDT
2.	Infrared Sensor	x10	200 BDT
3.	Ultrasonic Sensors	x2	160 BDT
4.	LED	x16	80 BDT
5.	Display	x1	150 BDT
6.	Buzzer	x1	15 BDT
7.	Bread Board	x1	100 BDT
8.	Wires	1 box	140 BDT
9.	Servo Motor SG90	x1	200 BDT
10.	Toy Cars	x8	80 BDT
11.	Miscellaneous		500 BDT

Therefore, it will take approximately 2,000 BDT to make this project.

5. Conclusion

The Automated Car Parking system reduces the hassle in the parking ground and traffic jam. It also saves time since it is already known to the driver if there is a parking available or not. It can also provide sustainable parking management in an eco- friendly manner.