KHULNA UNIVERSITY

Project report on

Smart Bike Parking Zone

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Smart Bike Parking Zone

Project Description:

1. First choosing the right Arduino board:

- We Selected an Arduino board that meets the specific requirements of our project, such as the number of inputs and outputs needed, the processing power required, and the form factor that best fits the enclosure design.
- Then we considered factors such as cost, availability, and compatibility with other components.

2. Setting up the Arduino environment:

- We installed the Arduino Integrated Development Environment (IDE) on our computer, and configured it to work with the selected Arduino board.
- Connected the Arduino board to our computer via USB or other connection method, and ensured that it was recognized by the IDE.
- Installed necessary libraries for the components in the system, such as sensors or LEDs.

3. Writing the code:

- Wrote the code that was run on the Arduino board, using the Arduino programming language and the IDE.
- Used the functions provided by the libraries for the sensors and other components, and customized them as needed for the specific requirements of our project.
- Implemented the logic for monitoring the parking spots, processing the sensor data, and sending the data to the user interface.
- Tested the code on the Arduino board, and used the serial monitor or other debugging tools to identified and resolved issues.

4. Connecting the components:

- Connected the sensors, LEDs, and other components to the appropriate pins on the Arduino board.
- Used wires to ensure secure and reliable connections.
- Tested the connections and confirmed that the components were functioning as expected.

5. Assembling the system:

- Assembled the components into an enclosure that was appropriate for the specific application.
- We ensured that the enclosure is secure, easily accessible for maintenance.
- Installed any additional features, such as a power supply.

Components:

1. Hardware Components:

We used these hardware items in this project, which is given below.

1. Arduino Uno micro-controller
2. LCD 20*4 display
3. Servo motor
4. I_2C Module
5. Jumper
6. 5V 2A Power Adapter
7. Female header
8. Male header
9. Motor-cycle

2. Sensor:

1. IR obstacle

3. Software Components:

We used these software items in this project, which is given below.

1. Arduino IDE

Setup: