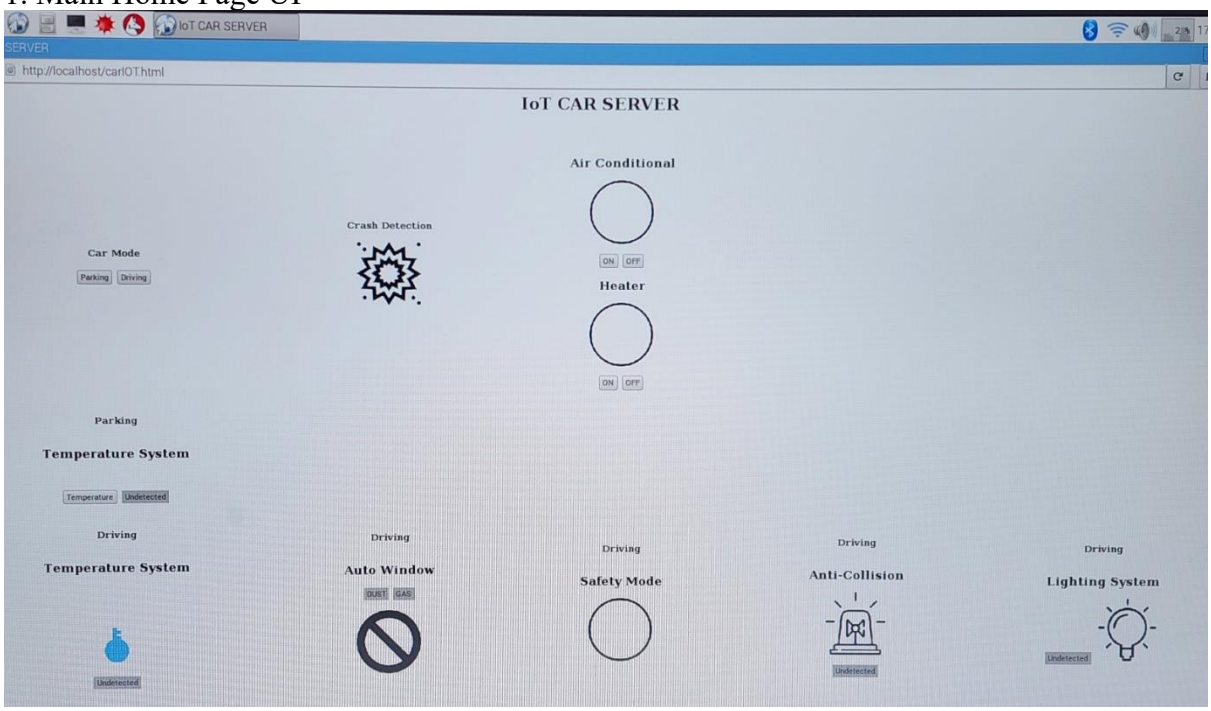
Team 4 IoT Car Manual

201904473 Leehyemi
202003705 Han Jihyoung
202101537 ParkJoonYoung

1. Main Home Page UI



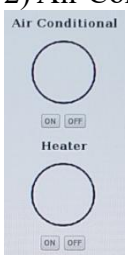
2. Manual
http://192.168.0.30/carIOT.html

[Default]

1) Crash Detecition

When car detects impact, Crash Detection's Image changes, which announces users that car has impact.
- Sensor: Knock Sensor

2) Air Conditional & Heater

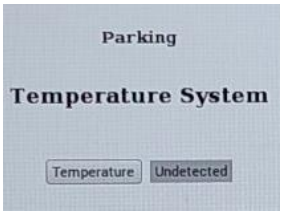


User can turn on and off the air conditonal and the heater.
When air conditional turns on, the first circle fills with blue and blue RGB turns on.
When heater turns on, the second circle fills with red and red RGB turns on.
- Sensor: RGB

[Parking Mode]

By clicking the Parking button, parking mode turns on.

1)Temperature System



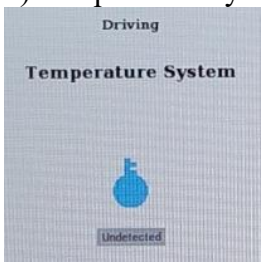
Before taking car, the user can know car's inner temperature. Furthermore, the heater or the air conditonal will be turned on automatically according to the temperature.

- Sensor: RGB, Temperature sensor.

[Driving Mode]

By clicking the Driving button, driving mode turns on.
If you want to turn off the driving mode, click the parking button.
Then all of the system regarding with driving mode will be turned off and reset.
All the system related to driving mode will operate as soon as the mode turns on.

1) Temperature System

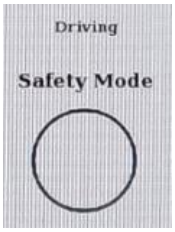


As soon as the driving mode turns on, the temperature sensor sences the car's inner temperature. If the value is lower than 21, the heater will be turns on (Red RGB). On the other hand, the value is higher than 23, the air conditional will be turns on (Blue RGB).
This system repeats once every five seconds.
- Sensor: RGB, Temeprature sensor

2) Auto Window System

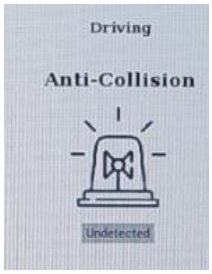
This system senses the dust value and gas value in the car. If the dust value is higher than 20 or gas value is also higher than 200, windows open. (In this system, instead of opening windows, the image will be changed.)
- Sensor: Dust sensor, Gas sensor

3) Safety Mode



While driving, if passangers stick their body out the window, the PIR sensor detects that and the circle fills with green color.
This system will be useful for parents having children.
- Sensor: PIR sensor, RGB

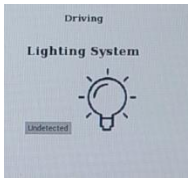
4) Anti-Collsion System



motor will turns on during 2 seconds. This means that breaking paddal is operating. The buzzer also ring during 2 seconds, and the image changes.

In this sytem, if the web server can know the car's speed, according to the value, the system can determine when the car should be stop or not.
If the speed is high and the distance is short, this means accident could occur. As a result, the web server would operate this sytem. Otherwise, eventhough the distance is short, the car's speed is slow, this means that accidents are less likely to happen. For this reason the web server would not operate this system.
- Sensor: Ultrasonic sensor, Buzzer, DC motor

5) Light System



When the user drives the car in midnight or rainy day, the light sensor senses brightness around the car. When the car's surroundings are dark, the headlights turn on, and when the surroundings are light, the headlights turn off.
- Sensor: Light sensor(CDS), LED