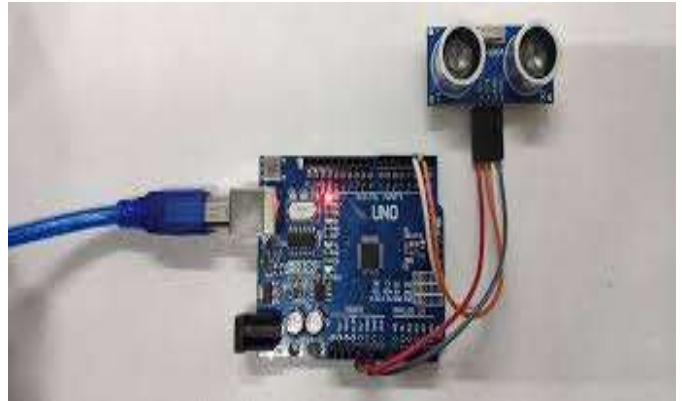


ANTI-THIEF DEVICE



Today, security has become one the top concern for everyone. Every day we try to keep ourselves protected from any type of violence, insecurity, robbery etc ... Companies try to sell us new products to keep us safe. Cameras, alarms, weapons (that are legal). But are we really safe? That is the question that we asked ourselves. This can't be answered by a bunch of students, of course, but we looked for solutions that could help us be safer in our houses. As you may know, students tend to share rooms in order to lower the price of the rent, especially for foreign student like us. Therefore, thanks to the IoT classes we managed to create a device that will help us anticipate burglary. We called the "Anti-thief". Now we will go further to explain you how it works, and how we managed to achieve it.

This is the plan we will follow in order to explain our project:

- I. Description of the device**
- II. Technical part**
- III. Comparison with devices on the market**

I. Description of the device

As we said in the introduction many students, especially foreign students, choose joint rent. This way is cheaper and more suitable for students. But this approach has a lot of safety issues. For example, burglary. Find ways to solve it. We will eventually design a complete home anti-theft device to make our home safer. Our device also uses an Ultrasound module. If an object blocks the Ultrasound module, the switch will be triggered, and the device will alarm. At the same time, the device has a camera. And we use the phone as a receiver, the phone will receive an alarm. This way the user can know that someone has entered their home and can know the situation at that time.

II. Technical part

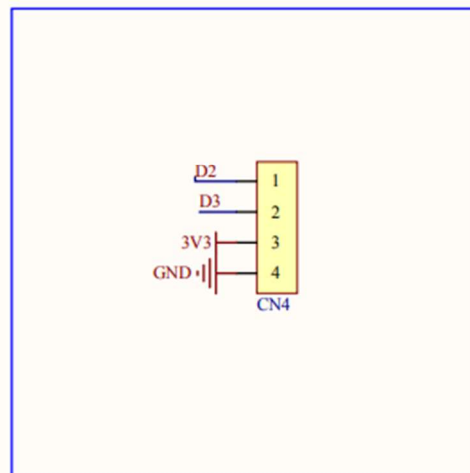
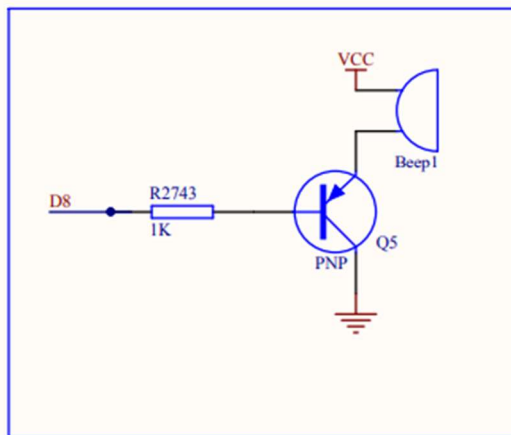
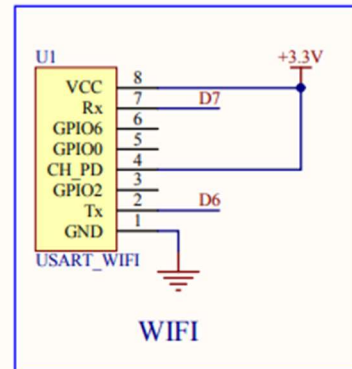
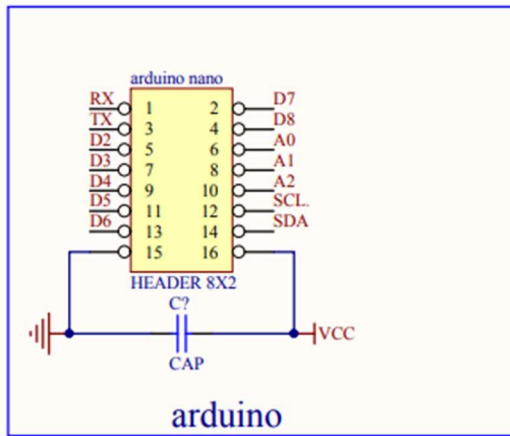
Material

Arduino board, ESP8266-01wifi module, active buzzer, HC-SR04 Ultrasound module

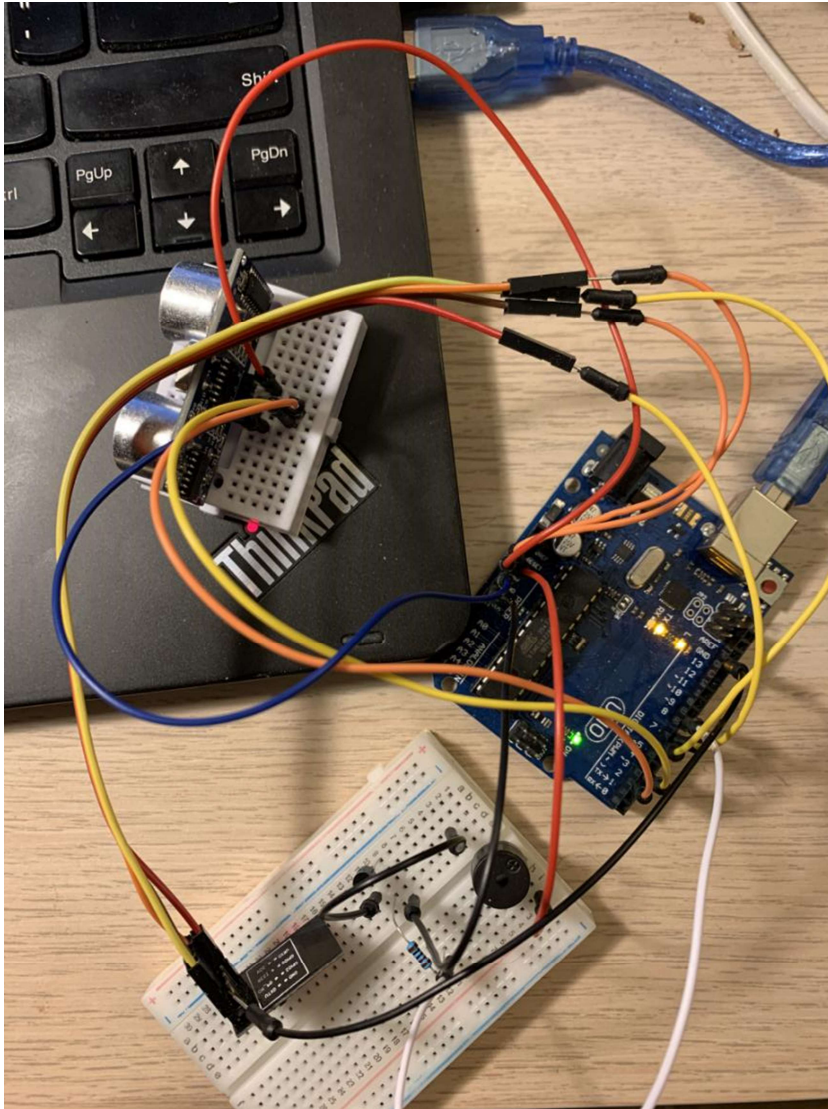
Description of our product

Modules made with ARDUINO and planning to use ultrasonic ranging to read one data every 0.5 seconds and compare the difference between the two data. If the difference between the two data changes is more than 30%, an alarm will be issued, and the buzzer will sound, and the mobile phone APP will receive the signal.

Schematic



Physical map



COM3

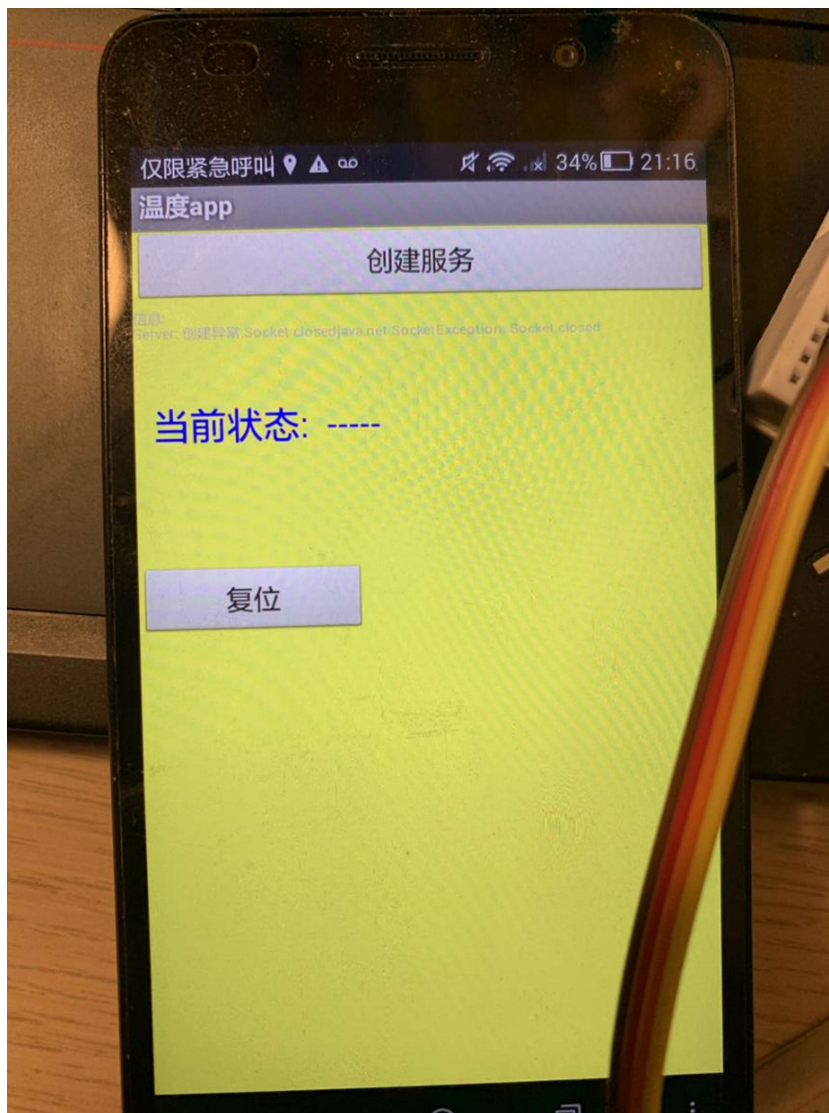
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```

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Mobile phone APP

We wrote a program in java. It runs on the Android system and can be connected to the WIFI module of the product and will receive a prompt when an alarm occurs.



Due to limited time and materials, our production of this product is relatively simple. In the future we can make the product design more reasonable. We can make the UI design of the app more attractive.

III. Comparison with devices on the market



Indoor burglar alarms present on the market

This product has an infrared detector. If a someone or something passes within the detection range, the detector will send a signal to the host, and at the same time emit noise and light to achieve the purpose of theft prevention.

Our advantages:

- **Easy to install**
Our equipment is smaller and easier to install in every place of the house, in a hallway or in a room. You can even install it in a drawer or cabinet to prevent others from opening the cabinet.
- **Low cost**
Our equipment is cheaper than equipment already on the market. And it is much simpler, so the cost is lower. More suitable for students.

To conclude, we can say that with more time and more means we could have done a better work, whatever, we have developed a device that can guarantee more safety to those who have small budgets. Our device is reliable and cheaper than other devices on the market.

**YIN Jiazhong/LU Mingming/CHARAI
Hamza**

ISCE Promo 2021

