1. Home Security Automation using PIR and SW420: intruder signal was send via Wi-Fi/Bluetooth from home (Arduino) to Server (Arduino) and server fetch real time from google (DNS) and save the time of security breach

**Part1: PIR+SW420**

|  |  |
| --- | --- |
| PIR+SW420\_1 | PIR+SW420\_2 |
| PIR+SW420\_3 | PIR+SW420\_4 |

We use PIR sensor to sense motion and SW420 to sense vibration on it. We integrate these sensors with Arduino to detect someone in PIR field and detect intruder when there is vibration in SW420 beyond certain threshold.

**Part2: WIFI**

|  |  |
| --- | --- |
| WIFI\_client | WIFI\_client\_output |
| WIFI\_server | WIFI\_server\_output |

We try to create a server and client in the system in part-1. Whenever there is detection at client side then a message is sent to server via TCP/IP. On receiving message at server, the server retrieve real-time from google.

**Part3: Bluetooth**

|  |  |
| --- | --- |
| Bluetooth\_client | Bluetooth\_client\_output |
| Bluetooth\_server | Bluetooth\_server\_output |

We try to create a server and client in the system in part-2. Whenever there is detection at client side then a message is sent to server via Bluetooth. On receiving message at server, the server retrieve real-time from google via TCP/IP.

Conclusion：

We learn to tx-rx data between client-server via TCP/IP and Bluetooth. We also learn to communicate with specific domain (eg. google).

This can be implement in real life for home automation and security purpose too.