

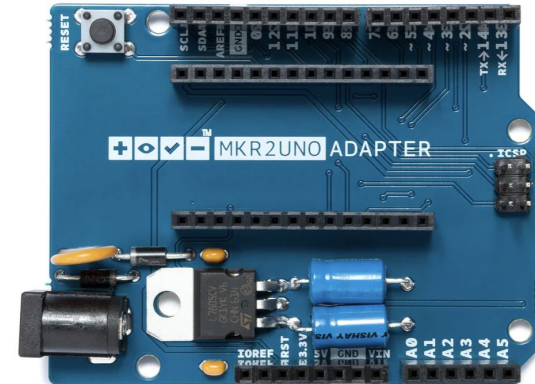
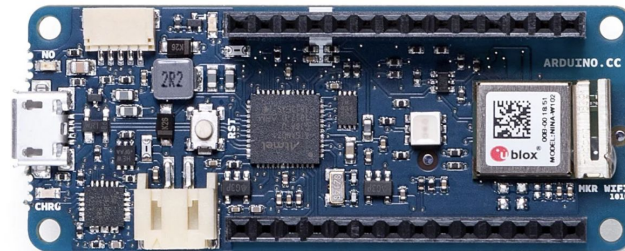
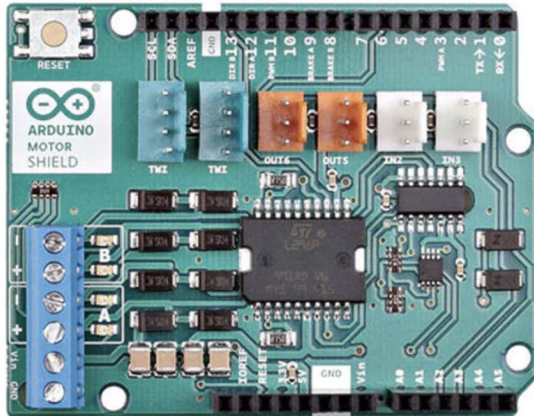


# Wifi Robot

Evan Yang (015564055)

# Arduino Boards

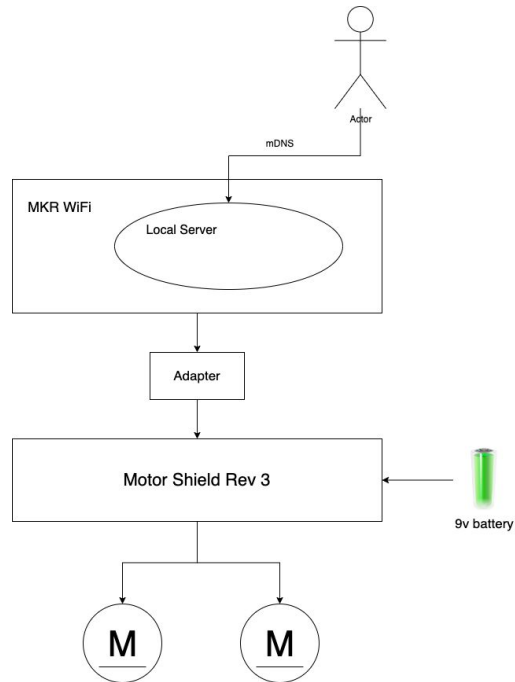
- Motor Shield Rev3: control the motor
- MKR WiFi 1010: connect to the WIFI
- MKR2UNO Adapter: adapter for MKR board and UNO shield





Source: [Arduino Project Hub](#)

# How it works?





# mDNS(Multicast Domain Name System)

- Multicast Domain Name System
- An mDNS message is a multicast UDP packet sent using IPv4 address 224.0.0.251, port 5353
- Client sends an IP multicast in order to resolve a hostname.
- The target machine then multicasts to all machine in the network with the message includes its IP address.
- Ends with **.local** Ex. arduino.local



## Pseudo Code

```
setup() {  
  pin_setting();  
  connect_to_wifi();  
  server.begin();  
  mdns.begin(mdnsName);  
}  
  
loop() {  
  mdns.run()  
  if (client) {  
    print_html();  
  }  
  drive_motor();  
}
```



## Issues:

1. The project uses the older version of MKR 1000 WiFi, which has a different library compared to the newer MKR 1010 WiFi.
2. Connection to the local server was not possible due to restrictions on the campus WiFi network.
3. The voltage supplied was insufficient to drive the 1-6V DC motor.
4. Learning how to use the laser cutter, including the required materials and software.



**Demo**