

CS227 Digital Systems
Project
Smart Home: Voice Controlled Home Automation using Arduino

BY:

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Arduino Code

```
#include <SoftwareSerial.h>
SoftwareSerial mySerial(3, 2);
void setup() {
    mySerial.begin(9600);
    Serial.begin(9600);
    mySerial.println("Ready");           //Checking if the Bluetooth is connected
    Serial.println("Ready to take voice commands");
    // Checking if serial monitor is connected
    pinMode(5, OUTPUT);
    pinMode(13, OUTPUT);
}

void loop() {

    if (mySerial.available() > 0) {
        //The code is taking in a single character input from the android app
        // if the command given matches with the prewritten commands.
        //Based on the single character received we can control the appliances
        going ON or OFF

        String value = mySerial.readString();
        mySerial.println(value);
        Serial.println(value);
        // "Turn on all appliances" is encoded as "A" by the android application
        if (value == "A") {
            digitalWrite(13, HIGH);
            digitalWrite(5, LOW);
        }
        // "Turn off all appliances" is encoded as "a" by the android application
        if (value == "a") {
            digitalWrite(13, LOW);
            digitalWrite(5, HIGH);
        }
    }
}
```

```
}  
// "Turn on blue LED" is encoded as "C" by the android application  
if (value == "C") {  
    digitalWrite(13, HIGH);  
}  
// "Turn Off blue LED" is encoded as "c" by the android application  
if (value == "c") {  
    digitalWrite(13, LOW);  
}  
// "Turn on fan" is encoded as "B" by the android application  
if (value == "B") {  
    digitalWrite(5, LOW);  
}  
// "Turn Off fan" is encoded as "b" by the android application  
if (value == "b") {  
    digitalWrite(5, HIGH);  
}  
delay(200);  
}  
}
```