**Introduction**

This project was inspired by Ironman (Jarvis). I thought of having a house that could virtually think on its own. Creating my own voice recognition system was a long shot as I have little or no knowledge of NLP (natural language processing), I had to use already existing platforms which would both be easy to access and effective.

I had to choose between Google assistant, Cortana, Siri, and Alexa. You can actually use any of these for this project except Siri which might be needing extra configurations. I chose Google assistant as she is quite intelligent and available to virtually everyone so long as you have an android phone.

**List of Components**

* InventOne Board
* Android phone
* Router
* USB cable
* Light bulbs or any device you intend to control
* Relay module

**Circuit Design**

The circuit is a pretty simple one, just hook up the relay to inventone board as shown in the fritzing image shown below. You need not worry about the other side of the relay for now, just ensure the dc part of the relay is well connected and identify the pins used for each relay.

For my project, I used an 8 channel relay so I have the flexibility of adding 8 devices to this project.

**Code**

We’d be making use of Adafruit IO and IFTTT platforms. If you are new to Adafruit IO check out this post which gives you a brief introduction to Adafruit IO. I’m not particularly sure there is any post available for IFTTT but if I find any be sure I’d post it here.

To use Adafruit IO you need to download the Adafruit IO library for Arduino, check out this tutorial on the inventone blog if you don’t know how to install a new library on the Arduino ide. Also not that you need to get the latest version of ESP core for Arduino (for newbies you can view this tutorial by Victor Shoaga on how to use Arduino IDE for inventone).

Upon meeting the above requirements you are good to go. You can copy this code into your ide, make sure you put in the SSID & PASSWORD of your router, also put in the username and key of your IO account.

This code will create new feeds on your IO account. To view result from your account you need to create triggers to view the values being sent to and from your board. You can check out this tutorial on how to create triggers and how to link them to a particular feed.

When this is done ensure that you can control the relays directly from the broker first before actually going to IFTTT to add voice control to it. Once everything works fine go to IFTTT (just google it and click the official website). Create an account with IFTTT and create a new applet.

Now here is the flow

IF

GOOGLE ASSISTANT

THEN

ADAFRUIT IO

Hope you get, the first thing down the line is google assistant, search google assistant in the link provided then type in the phrase you want to say to trigger whatever event you want on Adafruit IO. When you’re done the next thing is to choose the action to be performed when the words are said on google assistant. Just select Adafruit IO, provide your account details and let IFTTT have access to your IO account.

Next, select what feed/trigger you want to be affected by google assistant, also choose what value (integer, string, symbol...) gets sent to the trigger on your IO account. Upon completing this I believe you are good to go. I’ve provided a couple of pictures to guide you through the process of completing this task.

Should in case you have any issue leave a comment below and I’d attend to you as soon as possible.

#InventOne

**Further implementation**

This is a pretty straight forward implementation, like I said Jarvis was the goal and she is still the goal. You can view this project on my github page @ Oladapo Ajala I open to suggestion #InventOneNigeria

**Conclusion**

Once you can dream it, you can create it!.