Blue Assistant User Manual

This manual contains instructions for setting up all the components of blue assistant and integrating them into a final working product. There will be links to pre-compiled and pre-packaged zip files that will greatly simplify the setup process, but is not suitable for development. Developers working on this project should follow the setup instructions in README.md instead.

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# Before you start

## Agree to the Let’s Encrypt terms of use

The skill server setup and start-up scripts use Let’s Encrypt to get https certificates for your cloud server. By using those scripts, you acknowledge that you have read and agree to the Let’s Encrypt usage policies, which can be found at <https://letsencrypt.org/repository/> .

## Hardware requirements

To run the Blue Assistant you would need a Windows 10 machine with sound and microphone. Face tracking feature also require a front-facing webcam. You would also need a Debian-based Linux virtual machine with a public IP address.

## Prepare a domain name

The skill server must have a publicly accessible domain name. In this document we use “skill-server-install-test.mww.moe” as an example.

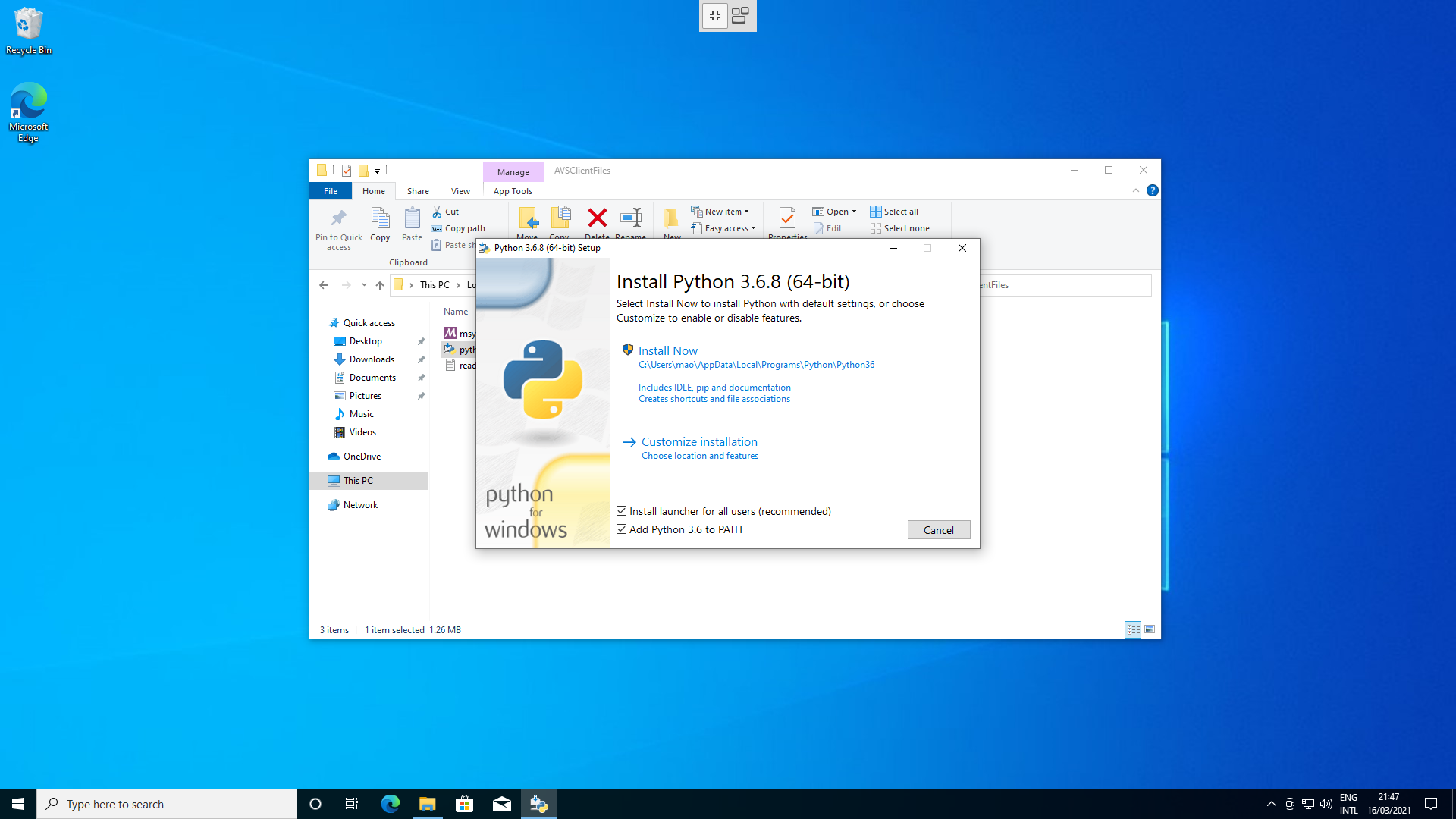
## Download resources

* Clone the git repository on your Windows machine.
* Download and extract <https://mw-public-data.s3.eu-west-2.amazonaws.com/e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855/avs.zip> into a new folder “avs”.
* Download and extract <https://mw-public-data.s3.eu-west-2.amazonaws.com/e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855/unity-build.zip> into a new folder “unity-build”.

## Install necessary software

Firstly, remove any existing versions of python which you have installed. Later versions of Python works as well but will require some tinkering.

Run the two installers in the “AVSClientFiles” folder of the git repository, which will install Python and MinGW (MSYS2), which will be used by the AVS client. Note that:

* When installing Python, you must select “Add Python 3.6 to PATH”:  
  
* When installing MinGW (MSYS2), you must install it to the default location:  
  Graphical user interface, application

  Description automatically generated

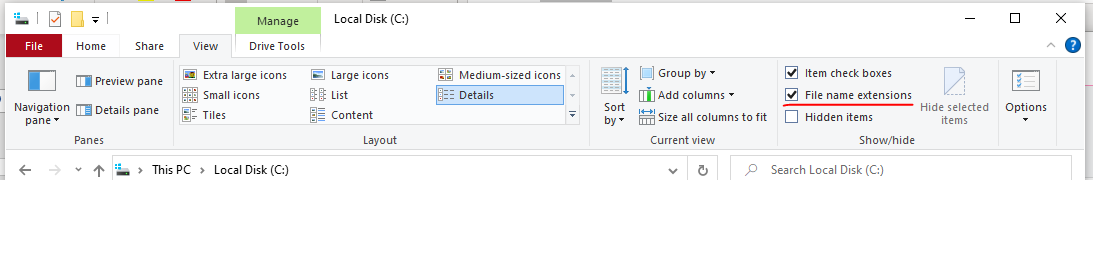
MinGW might also be useful for ssh-ing into your cloud server, if you want to perform the skill server setup on Windows and do not have another ssh client.

## Amazon account

You will need access to an Amazon account with administrator rights to the Alexa skill.

## Show file name extensions

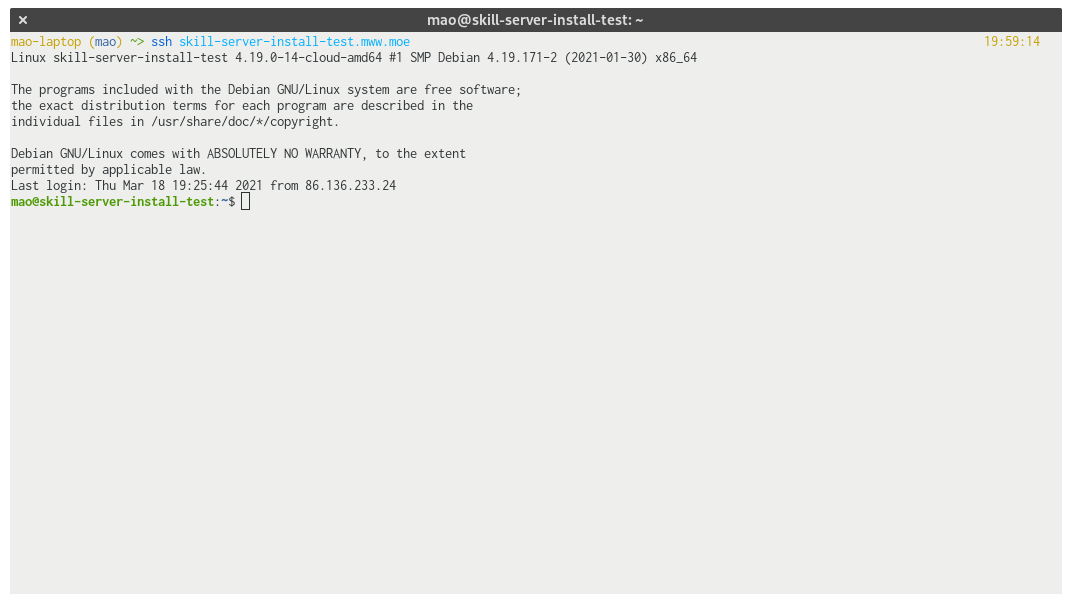
Since this document will be referring to files with their extension, make sure this is checked:



# Skill server setup

## Setting up the cloud server

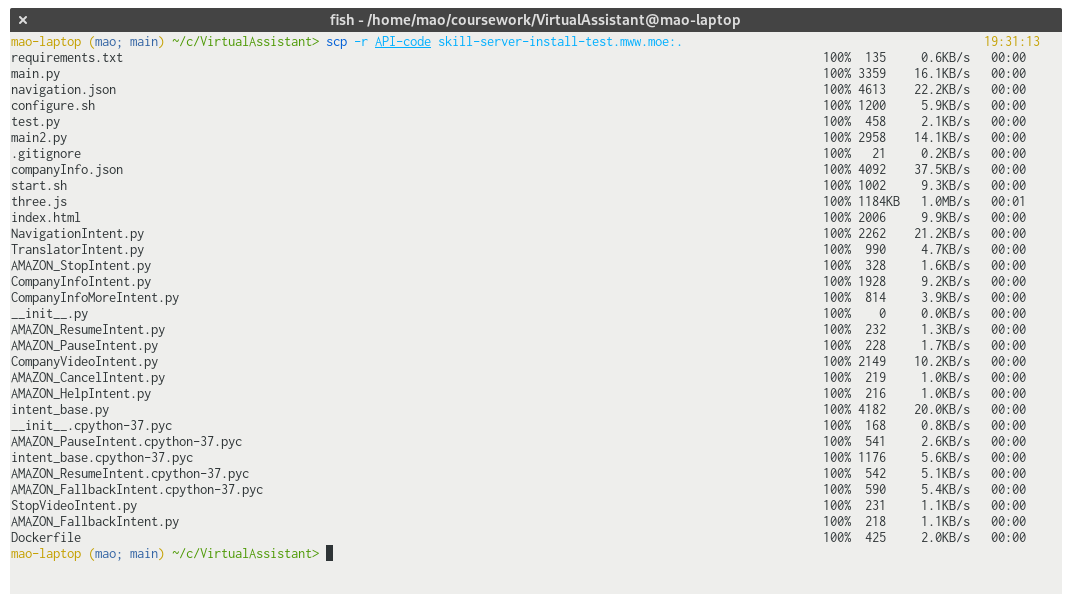
First, check if you can ssh into your cloud server. You can use the ssh command in the MinGW shell to do this if you are on Windows. Keep this window open.



Then, copy the “API-code” folder onto your server. In Linux and MinGW, this can be done with the “scp” program. For example:

scp -r API-code *your-server-domain*:.

will copy the API-code folder to your home directory on the server.



Now, on the previous ssh window, run the following commands to start the config script:

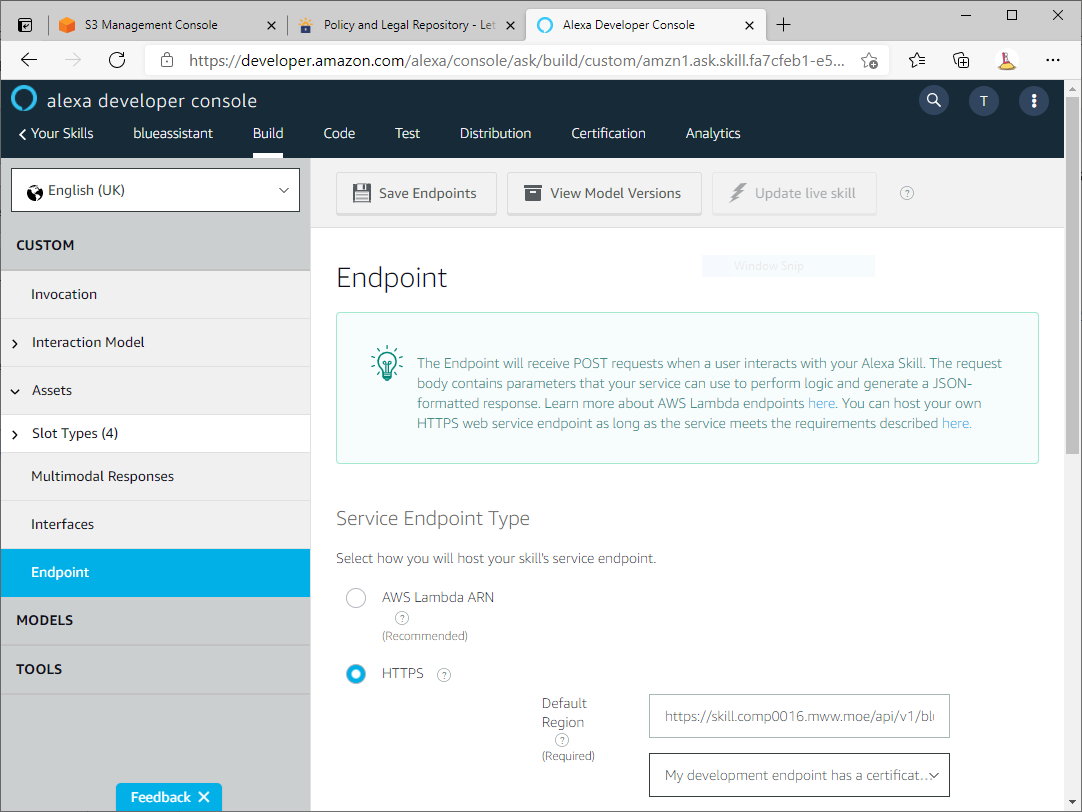
cd API-code  
./configure.sh *your-server-domain*



This might take a while, but your API server will be fully ready after the script is finished, and the skill server will keep running even if you close your ssh connection, and will also start up automatically when your cloud server boots.

## Setting the endpoint URL of your skill

With your Amazon account logged-in, go to <https://developer.amazon.com/alexa/console/ask/> and click on your skill. Then, navigate to the “Endpoint” page:



Make sure that “HTTPS” is selected, and under “Default Region” enter “https://*your-server-domain*/api/v1/blueassistant” and make sure “My development endpoint has a certificate from a trusted certificate authority” is selected.

# AVS client setup

## Install runtime dependencies

Open a MinGW window, and run:

pacman -S --noconfirm --needed git mingw-w64-x86\_64-toolchain mingw-w64-x86\_64-lld mingw-w64-x86\_64-cmake msys/tar msys/make mingw-w64-x86\_64-sqlite3 mingw64/mingw-w64-x86\_64-gstreamer mingw64/mingw-w64-x86\_64-gst-plugins-good mingw64/mingw-w64-x86\_64-gst-plugins-base mingw64/mingw-w64-x86\_64-gst-plugins-ugly mingw64/mingw-w64-x86\_64-gst-plugins-bad mingw64/mingw-w64-x86\_64-faad2 mingw64/mingw-w64-x86\_64-portaudio

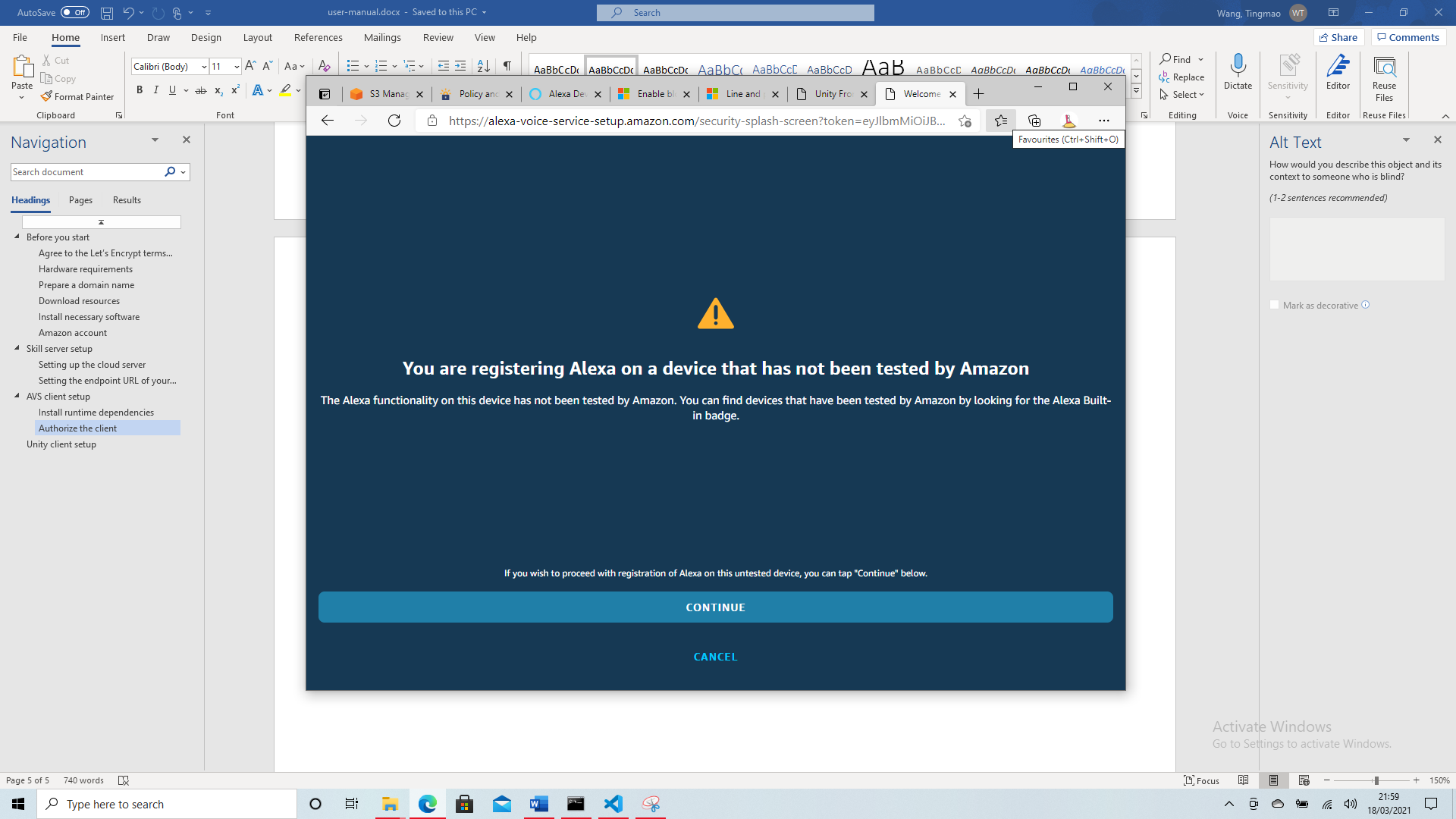
**Note that this is a single line of command**. You can find this piece of code in README.md or copy from user-manual.pdf, if copying from your pdf viewer messes thing up. Installation can take quite a while. Only continue after this is done.

## Authorize the client

Run “startsample.bat” under your extracted “avs” folder. Wait for a while, then scroll up until you see this:Graphical user interface, application

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Copy the code, go to <https://amazon.com/us/code> and enter it (you might have to login to your Amazon account first). Click “continue” on this page:



If this is successful, you will then see this from your client:

Graphical user interface, application

Description automatically generated

You can then close the client and your browser tab. Then, run “startapp.bat”. After a while you should see two windows, one is the Alexa client and another is the python bridge, which is used to connect the client with Unity. These need to be kept open while running the unity client.

# Unity client setup

Open Avatar/ConfigGen/index.html in the git repository with your browser, then follow the instruction. Do not check “Use test client”. Once you’re done, click “Generate config.json” and save (copy) the file into the avatar\_Data folder under your extracted “unity-build”, overriding the existing “config.json”.

At this point all setup procedure has completed. If you have kept the two windows spawned by the Alexa client earlier open, then simply run “Avatar.exe” under “unity-build” to run the assistant. In case you have closed the Alexa client, run “startapp.bat” again to reopen.

You can use Alt+F4 to exit the unity client.

