QEMU Simulator and Raspberry PI Setup

We setup a simulation environment with QEMU to run Raspberry PI code on your PC.

Step 1. Follow the instructions in this video to setup QEMU and KVM (skip the last step of installing Ubuntu Linux)

QEMU Installation Guide for Windows PC [with KVM]
https://www.youtube.com/watch?v=dPg8P5DYZNg

First, from Search box, start "Turn Windows features on or off", and enable these three options: HyperV, Windows Subsystem for Linux, Virtual Machine Platform.

From Windows Powershell, run:
wsl --install
wsl --set-default-version 2

From WSL, run:
sudo apt update && sudo apt upgrade -y
sudo apt install qemu-kvm libvirt-daemon-system libvirt-clients bridge-utils -y
sudo usermod -aG kvm $USER

From Windows Powershell, run:
wsl –shutdown

Skip the rest of the steps to install Ubuntu Linux.

Step 2. Follow the instructions on this page to install Raspberry PI on QEMU:

Emulating a Raspberry Pi in QEMU
https://interrupt.memfault.com/blog/emulating-raspberry-pi-in-qemu
In the echo command, replace the long hash string after pi: with what you got from running "openssl passwd -6" on you own computer, and replace userconf with userconf.txt.
$ echo
'pi:6rBoByrWRKMY1EHFy$ho.LISnfm83CLBWBE/yqJ6Lq1TinRlxw/ImMTPcvvMuUfhQ
YcMmFnpFXUPowjy2br1NA0IACwF9JKugSNuHoe0' | sudo tee /mnt/image/userconf.txt

You should now be able to boot up a Raspberry PI image and ssh to it.