Setting up X-forwarding with Windows

Hi all,

After a lot of frustration of setting up X-forwarding on Windows, I want to share my experience to hopefully help others who are having trouble. Note, this is for Window users who want to SSH connect to the Linux server and wants to use remote SSH (the VS Code extension).

So first, in your SSH config file (usually found in `C:\Users\[username]\.ssh\config`), you want to add:

```
ForwardAgent yes
ForwardX11 yes
ForwardX11Trusted yes
```

for your `cs246` host.

Then you want to follow the steps here https://docs.cse.lehigh.edu/xforwarding/xforwarding-win/#confirm-the-version-of-Windows in downloading VcXsrv and *running* VcXsrv.

Make sure that VcXsrv (your X server) is running before continuing.

To make the X-forwarding work, the remote server needs to know where your X server is running locally. Open up Windows PowerShell, and set your display variable:

```
$env:DISPLAY = "localhost:0"
```

Then make a connection to the Linux server via `ssh` (with `-Y` option):

```
ssh -Y cs246
```

Log in via your password and 2FA. Once on the Linux remote server, you want to output your display variable:

```
echo $DISPLAY
```

It should output something like: `localhost:12.0` or similar. Note that the number might not be the same as the display variable you set locally or in this example. If the display variable is empty, then something is wrong. The command `xeyes` should work at this step in your PowerShell terminal.

Then open up VS Code, and connect to your host as usual, logging in with your password and 2FA. Once logged in, on VS Code, set the display variable as what we found in the previous step. Open up a terminal in VS Code, and run:

```
export DISPLAY=localhost:12.0
```

X-forwarding should work now. You can check by running `xeyes` or `xclock` or the code in the `graphicsdemo` folder.

[Additional comment from Benjamin Chen:]

Just an additional comment to this. You can set the environment variables on your Windows machine so that you don't have to do:

```
$env:DISPLAY = "localhost:0"
```

every time. This can be achieved by going into:

A reboot may be needed for it to take effect.