Windows 10 itself does not support GUI. In order to run GUI in wsl you need to install a X server and get it to configure correctly.

I would suggest you to install **VcXsrv** to display GUI.

I am not able to run GUI successfully by sudo apt-get install ubuntu-desktop. However, I successfully installed mate-desktop GUI in **Debian** and **ubuntu**.

Here are the steps for me to display GUI by wsl. You can check my videos on detailed steps [Install GUI (mate desktop) to Microsoft Windows Subsystem Linux](https://www.youtube.com/watch?v=QjogEWudpaM)

**step 1:** install Debian or Ubuntu Linux subsystem: - PowerShell as administrator: Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux - Microsoft Store: install "Debian" or "ubuntu"

**step 2:** install mate tesktop for **Debian**: - open Debian in windows 10. Type the following commend - sudo apt-get update - sudo apt install task-mate-desktop

**OR** install mate-desktop for **Ubuntu** - open Ubuntu console in windows 10 - sudo apt install tasksel - sudo apt update - sudo tasksel install ubuntu-mate-desktop

**step 3:** install **VcXsrv** in windows 10: - download from: <https://sourceforge.net/projects/vcxsrv/> - open XLauch, and use the following options for setup - select: "One large window" - Display number: 0 - next - Start no client - next - finish

**step 4:** setup display in linux console: - export DISPLAY=:0 - export LIBGL\_ALWAYS\_INDIRECT=1

**step 5:** start Mate-desktop environment: - run mate-session

Step 3 and step 4 are extremely important to display GUI in windows 10 wsl.

<https://askubuntu.com/questions/1162808/run-ubuntu-desktop-on-wsl-ubuntu-18-04-lts>