1 Hands-On Exercise: Start Your X Server

I need to start my own X Server somewhere, but there is one running already!

You need to find out where any existing X server is running and start your own on a new display which does not interfere with that one. You need an X terminal on that display as well, for entering commands.

	What you need to do	***How to do it***	***Notes***
1	discover your IP address	**/sbin/ifconfig eth0**	look for `inet addr:`
2	see where X is already running	**ps ax|grep X**	probably `/usr/bin/X :0`
3	start X on a free display	**CTRL-ALT-F2** **login: lsg** **password: lsg** **X :1 &**	gets you a free Virtual Terminal log in as user `lsg` starts on display 1 running in background
4	put an X terminal on display	**CTRL-ALT-F2** **xterm -display :1 &**	return to text terminal and press `ENTER` puts `xterm` on display `1` running in background
5	go to that display	**CTRL-ALT-F8**	logical display number `1`
6	focus in the `xterm`		move the mouse cursor may now type commands

2 Hands-On Exercise: Share your Photos

I've got some photos to show you to peruse at your leisure!

You have the photos and the software to display them, but your friends do not. Get them to start their own X server, and allow you to display on it. Then divert your display to their X server and run your photo software; it will display on their computer and be controlled by them.

	What they need to do	***How to do it***	***Notes***
1	discover their IP address	**/sbin/ifconfig eth0**	look for `inet addr:`
2	see where X is already running	**ps ax|grep X**	probably `/usr/bin/X :0`
3	start X on a free display	**CTRL-ALT-F2** **login: lsg** **password: lsg** **X :1 &**	gets them to a free VT log in as user 'lsg' starts on display 1
4	put an X terminal on display	**CTRL-ALT-F2** **xterm -display :1 &**	return to text terminal and press `ENTER` puts xterm on display 1
5	go to that display	**CTRL-ALT-F8**	logical display number 1
6	focus in the xterm get display variable allow X display from you	 **printenv** **xhost +YOUR-IP**	move the mouse cursor look for `DISPLAY` eg xhost +192.168.1.70

	What you need to do	***How to do it***	***Notes***
1	point your display to theirs	**export DISPLAY=FRIEND-IP:DISP**	eg 192.168.1.77:1
2	run your photo software	**qiv -t *.jpg**	

3 Hands-On Exercise: Use your friend's Software

I don't have OpenOffice installed (but your friend has) and I need to create a doco! (This is a typical application for which `X` was originally designed.) You need to start your own X server, then allow another computer to display on it; then login to the other computer, divert their display to your X display, and run `openoffice` from their computer.

	What you need to do	***How to do it***	***Notes***
1	discover your IP address:	**/sbin/ifconfig eth0**	look for `inet addr:`
2	see where X is running:	**CTRL-ALT-F2** **login: lsg** **passwd: lsg** **ps ax|grep X**	gets you to a free VT log in as user 'lsg' with password 'lsg' finds X running on :0
3	start X on a free display	**X :1 &**	starts on display 1
4	put an X terminal there	**CTRL-ALT-F2** **xterm -display :1 &**	
5	go to that display	**CRTL-ALT-F8**	
6	focus mouse in xterm		
7	allow displays from friend	**xhost +FRIENDS-IP**	eg, xhost +192.168.1.77
8	login to their computer	**ssh user@IP**	eg ssh lsg@192.168.1.77 answer `yes` to `ssh` question
9	divert display back to you	**export DISPLAY=IP:DISP**	eg 192.168.1.70:1
10	run openoffice from them	**openoffice**	which displays on yours
11	close `openoffice` and log out	**exit**	when you have finished

4 Hands-On Exercise: Share Desktop to get Help

I need some help with a script; can you show me what I'm doing wrong?

Here is an opportunity to share desktops. It is an application of *virtual network computing* that X handles quite fast (no need to start your own X server). You need to decide whose desktop is to be shared. That person runs `x11vnc` which makes it available for sharing and specifies its display terminology. The other computer may then view it – but both can type onto it and start applications that display on both computers.

	What you need to do	***How to do it***	***Notes***
1	get to desktop to share	**CRTL-ALT-F7**	move to selected desktop
2	make desktop available	**x11vnc &**	look near end of text for `the VNC Desktop is host:0`
3	notify other of display name		eg IP address 192.168.1.77:0 plus display :0 in total: 192.168.1.77:0
4	view it from other computer	**xvncviewer IP:DISP**	eg xvncviewer 192.168.1.77:0
5	stop viewing (initiated by them)	**F8**	they press this on their computer and they select 'quit viewer' with mouse from menu that appears