

Device Drivers - CED17I046

Exercise 4

To have two mouse cursors on the monitor.

1. Before inserting the external mouse.

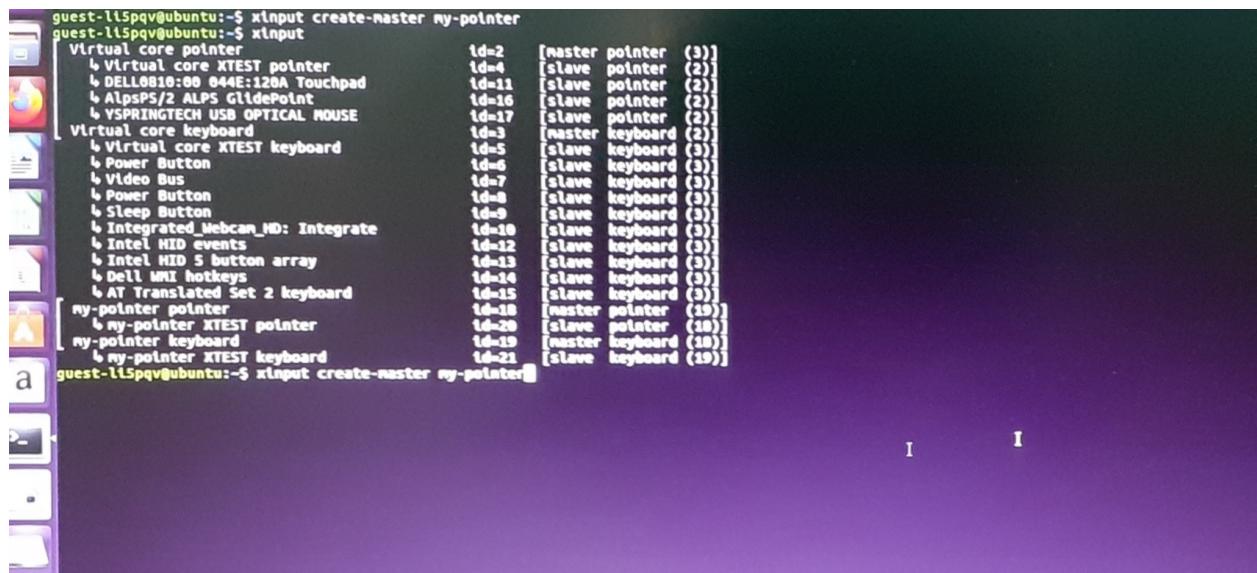
```
guest-li5pqv@ubuntu:~$ xinput
Virtual core pointer          id=2  [master pointer (3)]
↳ Virtual core XTEST pointer id=4  [slave  pointer (2)]
↳ DELL0810:00 044E:120A Touchpad id=11 [slave  pointer (2)]
↳ AlpsPS/2 ALPS GlidePoint   id=16 [slave  pointer (2)]
Virtual core keyboard         id=3  [master keyboard (2)]
↳ Virtual core XTEST keyboard id=5  [slave  keyboard (3)]
↳ Power Button                id=6  [slave  keyboard (3)]
↳ Video Bus                   id=7  [slave  keyboard (3)]
↳ Power Button                id=8  [slave  keyboard (3)]
↳ Sleep Button                id=9  [slave  keyboard (3)]
↳ Integrated_Webcam_HD: Integrate id=10 [slave keyboard (3)]
↳ Intel HID events            id=12 [slave keyboard (3)]
↳ Intel HID 5 button array    id=13 [slave keyboard (3)]
↳ Dell WMI hotkeys           id=14 [slave keyboard (3)]
↳ AT Translated Set 2 keyboard id=15 [slave keyboard (3)]
guest-li5pqv@ubuntu:~$ █
```

2. After inserting the external mouse.

```
guest-li5pqv@ubuntu:~$ xinput
Virtual core pointer          id=2  [master pointer (3)]
↳ Virtual core XTEST pointer id=4  [slave  pointer (2)]
↳ DELL0810:00 044E:120A Touchpad id=11 [slave  pointer (2)]
↳ AlpsPS/2 ALPS GlidePoint   id=16 [slave  pointer (2)]
↳ YSPRINGTECH USB OPTICAL MOUSE id=17 [slave  pointer (2)]
Virtual core keyboard         id=3  [master keyboard (2)]
↳ Virtual core XTEST keyboard id=5  [slave  keyboard (3)]
↳ Power Button                id=6  [slave  keyboard (3)]
↳ Video Bus                   id=7  [slave  keyboard (3)]
↳ Power Button                id=8  [slave  keyboard (3)]
↳ Sleep Button                id=9  [slave  keyboard (3)]
↳ Integrated_Webcam_HD: Integrate id=10 [slave keyboard (3)]
↳ Intel HID events            id=12 [slave keyboard (3)]
↳ Intel HID 5 button array    id=13 [slave keyboard (3)]
↳ Dell WMI hotkeys           id=14 [slave keyboard (3)]
↳ AT Translated Set 2 keyboard id=15 [slave keyboard (3)]
guest-li5pqv@ubuntu:~$ █
```

3. Creating a new pointer using xinput.

```
guest-l15pqv@ubuntu:~$ xinput create-master my-pointer
guest-l15pqv@ubuntu:~$ xinput
Virtual core pointer id=2 [master pointer (3)]
↳ Virtual core XTEST pointer id=4 [slave pointer (2)]
↳ DELL0810:00 044E:120A Touchpad id=11 [slave pointer (2)]
↳ AlpsPS/2 ALPS GlidePoint id=16 [slave pointer (2)]
↳ YSPRINGTECH USB OPTICAL MOUSE id=17 [slave pointer (2)]
Virtual core keyboard id=3 [master keyboard (2)]
↳ Virtual core XTEST keyboard id=5 [slave keyboard (3)]
↳ Power Button id=6 [slave keyboard (3)]
↳ Video Bus id=7 [slave keyboard (3)]
↳ Power Button id=8 [slave keyboard (3)]
↳ Sleep Button id=9 [slave keyboard (3)]
↳ Integrated_Webcam_HD: Integrate id=10 [slave keyboard (3)]
↳ Intel HID events id=12 [slave keyboard (3)]
↳ Intel HID 5 button array id=13 [slave keyboard (3)]
↳ Dell WMI hotkeys id=14 [slave keyboard (3)]
↳ AT Translated Set 2 keyboard id=15 [slave keyboard (3)]
[ my-pointer pointer id=18 [master pointer (19)]
  ↳ my-pointer XTEST pointer id=20 [slave pointer (18)]
  ↳ my-pointer keyboard id=19 [master keyboard (18)]
    ↳ my-pointer XTEST keyboard id=21 [slave keyboard (19)]
guest-l15pqv@ubuntu:~$
```



```
guest-l15pqv@ubuntu:~$ xinput create-master my-pointer
guest-l15pqv@ubuntu:~$ xinput
Virtual core pointer id=2 [master pointer (3)]
↳ Virtual core XTEST pointer id=4 [slave pointer (2)]
↳ DELL0810:00 044E:120A Touchpad id=11 [slave pointer (2)]
↳ AlpsPS/2 ALPS GlidePoint id=16 [slave pointer (2)]
↳ YSPRINGTECH USB OPTICAL MOUSE id=17 [slave pointer (2)]
Virtual core keyboard id=3 [master keyboard (2)]
↳ Virtual core XTEST keyboard id=5 [slave keyboard (3)]
↳ Power Button id=6 [slave keyboard (3)]
↳ Video Bus id=7 [slave keyboard (3)]
↳ Power Button id=8 [slave keyboard (3)]
↳ Sleep Button id=9 [slave keyboard (3)]
↳ Integrated_Webcam_HD: Integrate id=10 [slave keyboard (3)]
↳ Intel HID events id=12 [slave keyboard (3)]
↳ Intel HID 5 button array id=13 [slave keyboard (3)]
↳ Dell WMI hotkeys id=14 [slave keyboard (3)]
↳ AT Translated Set 2 keyboard id=15 [slave keyboard (3)]
[ my-pointer pointer id=18 [master pointer (19)]
  ↳ my-pointer XTEST pointer id=20 [slave pointer (18)]
  ↳ my-pointer keyboard id=19 [master keyboard (18)]
    ↳ my-pointer XTEST keyboard id=21 [slave keyboard (19)]
guest-l15pqv@ubuntu:~$ xinput create-master my-pointer
```

4. Reattaching the external mouse pointer to the newly created pointer.

```
guest-lis5pqv@ubuntu:~$ xinput create-master my-pointer
guest-lis5pqv@ubuntu:~$ xinput
  Virtual core pointer                         id=2   [master pointer (3)]
  ↳ Virtual core XTEST pointer                id=4   [slave  pointer (2)]
  ↳ DELL0810:00 044E:120A Touchpad           id=11  [slave  pointer (2)]
  ↳ AlpsPS/2 ALPS GlidePoint                 id=16  [slave  pointer (2)]
  ↳ YSPRINGTECH USB OPTICAL MOUSE            id=17  [slave  pointer (2)]
  ↳ Virtual core keyboard                     id=3   [master keyboard (2)]
  ↳ Virtual core XTEST keyboard              id=5   [slave  keyboard (3)]
  ↳ Power Button                            id=6   [slave  keyboard (3)]
  ↳ Video Bus                                id=7   [slave  keyboard (3)]
  ↳ Power Button                            id=8   [slave  keyboard (3)]
  ↳ Sleep Button                            id=9   [slave  keyboard (3)]
  ↳ Integrated_Webcam_HD: Integrate        id=10  [slave  keyboard (3)]
  ↳ Intel HID events                        id=12  [slave  keyboard (3)]
  ↳ Intel HID 5 button array                id=13  [slave  keyboard (3)]
  ↳ Dell WMI hotkeys                       id=14  [slave  keyboard (3)]
  ↳ AT Translated Set 2 keyboard           id=15  [slave  keyboard (3)]
  ↳ my-pointer pointer                      id=18  [master pointer (1)]
  ↳ my-pointer XTEST pointer               id=20  [slave  pointer (1)]
  ↳ my-pointer keyboard                     id=19  [master keyboard (1)]
  ↳ my-pointer XTEST keyboard              id=21  [slave  keyboard (1)]
guest-lis5pqv@ubuntu:~$ xinput reattach 17 18
guest-lis5pqv@ubuntu:~$ xinput
  Virtual core pointer                         id=2   [master pointer (3)]
  ↳ Virtual core XTEST pointer                id=4   [slave  pointer (2)]
  ↳ DELL0810:00 044E:120A Touchpad           id=11  [slave  pointer (2)]
  ↳ AlpsPS/2 ALPS GlidePoint                 id=16  [slave  pointer (2)]
  ↳ Virtual core keyboard                     id=3   [master keyboard (2)]
  ↳ Virtual core XTEST keyboard              id=5   [slave  keyboard (3)]
  ↳ Power Button                            id=6   [slave  keyboard (3)]
  ↳ Video Bus                                id=7   [slave  keyboard (3)]
  ↳ Power Button                            id=8   [slave  keyboard (3)]
  ↳ Sleep Button                            id=9   [slave  keyboard (3)]
  ↳ Integrated_Webcam_HD: Integrate        id=10  [slave  keyboard (3)]
  ↳ Intel HID events                        id=12  [slave  keyboard (3)]
  ↳ Intel HID 5 button array                id=13  [slave  keyboard (3)]
  ↳ Dell WMI hotkeys                       id=14  [slave  keyboard (3)]
  ↳ AT Translated Set 2 keyboard           id=15  [slave  keyboard (3)]
  ↳ my-pointer pointer                      id=18  [master pointer (1)]
  ↳ my-pointer XTEST pointer               id=20  [slave  pointer (1)]
  ↳ my-pointer keyboard                     id=19  [master keyboard (1)]
  ↳ my-pointer XTEST keyboard              id=21  [slave  keyboard (1)]
guest-lis5pqv@ubuntu:~$
```

5. Removing the newly added pointer.

```
guest-lis5pqv@ubuntu:~$ xinput remove-master 18
guest-lis5pqv@ubuntu:~$ xinput
  Virtual core pointer                         id=2   [master pointer (3)]
  ↳ Virtual core XTEST pointer                id=4   [slave  pointer (2)]
  ↳ DELL0810:00 044E:120A Touchpad           id=11  [slave  pointer (2)]
  ↳ AlpsPS/2 ALPS GlidePoint                 id=16  [slave  pointer (2)]
  ↳ Virtual core keyboard                     id=3   [master keyboard (2)]
  ↳ Virtual core XTEST keyboard              id=5   [slave  keyboard (3)]
  ↳ Power Button                            id=6   [slave  keyboard (3)]
  ↳ Video Bus                                id=7   [slave  keyboard (3)]
  ↳ Power Button                            id=8   [slave  keyboard (3)]
  ↳ Sleep Button                            id=9   [slave  keyboard (3)]
  ↳ Integrated_Webcam_HD: Integrate        id=10  [slave  keyboard (3)]
  ↳ Intel HID events                        id=12  [slave  keyboard (3)]
  ↳ Intel HID 5 button array                id=13  [slave  keyboard (3)]
  ↳ Dell WMI hotkeys                       id=14  [slave  keyboard (3)]
  ↳ AT Translated Set 2 keyboard           id=15  [slave  keyboard (3)]
  ↳ YSPRINGTECH USB OPTICAL MOUSE           id=17  [floating slave]
guest-lis5pqv@ubuntu:~$
```

6. Reattaching the external mouse pointer to the original pointer.

```
guest-li5pqv@ubuntu:~$ xinput reattach 17 2
guest-li5pqv@ubuntu:~$ xinput
  Virtual core pointer                      id=2    [master pointer (3)]
    ↳ Virtual core XTEST pointer            id=4    [slave  pointer (2)]
    ↳ DELL0810:00 044E:120A Touchpad       id=11   [slave  pointer (2)]
    ↳ AlpsPS/2 ALPS GlidePoint             id=16   [slave  pointer (2)]
    ↳ YSPRINGTECH USB OPTICAL MOUSE        id=17   [slave  pointer (2)]
  Virtual core keyboard                     id=3    [master keyboard (2)]
    ↳ Virtual core XTEST keyboard          id=5    [slave  keyboard (3)]
    ↳ Power Button                         id=6    [slave  keyboard (3)]
    ↳ Video Bus                            id=7    [slave  keyboard (3)]
    ↳ Power Button                         id=8    [slave  keyboard (3)]
    ↳ Sleep Button                          id=9    [slave  keyboard (3)]
    ↳ Integrated_Webcam_HD: Integrate     id=10   [slave  keyboard (3)]
    ↳ Intel HID events                     id=12   [slave  keyboard (3)]
    ↳ Intel HID 5 button array            id=13   [slave  keyboard (3)]
    ↳ Dell WMI hotkeys                   id=14   [slave  keyboard (3)]
    ↳ AT Translated Set_2 keyboard        id=15   [slave  keyboard (3)]
guest-li5pqv@ubuntu:~$ █
```