

I pledge my honor that I have abided by the Stevens Honor System

The image shows a screenshot of a Virtual Machine window titled "Debian - OS SIT [Running] - Oracle VM VirtualBox". The window has a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu bar is a status bar that reads: "The Virtual Machine reports that the guest OS supports **mouse pointer integration**. This means that you do not need to capture the mouse pointer to be able to use it in your guest OS -- all mouse actions you perform when the mouse pointer is over the Virtual Machine's display are directly sent to the guest OS. If the".

The main area of the window displays a terminal window with the following text:

```
Login incorrect
debian login: student
Password:
Last login: Sun Feb 27 20:19:36 EST 2022 on tty1
Linux debian 4.9.0Matthew_Vaused_10450114 #2 SMP Sun Feb 27 20:24:55 EST 2022 x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
student@debian:~$ uname -a
Linux debian 4.9.0Matthew_Vaused_10450114 #2 SMP Sun Feb 27 20:24:55 EST 2022 x86_64 GNU/Linux
student@debian:~$
```

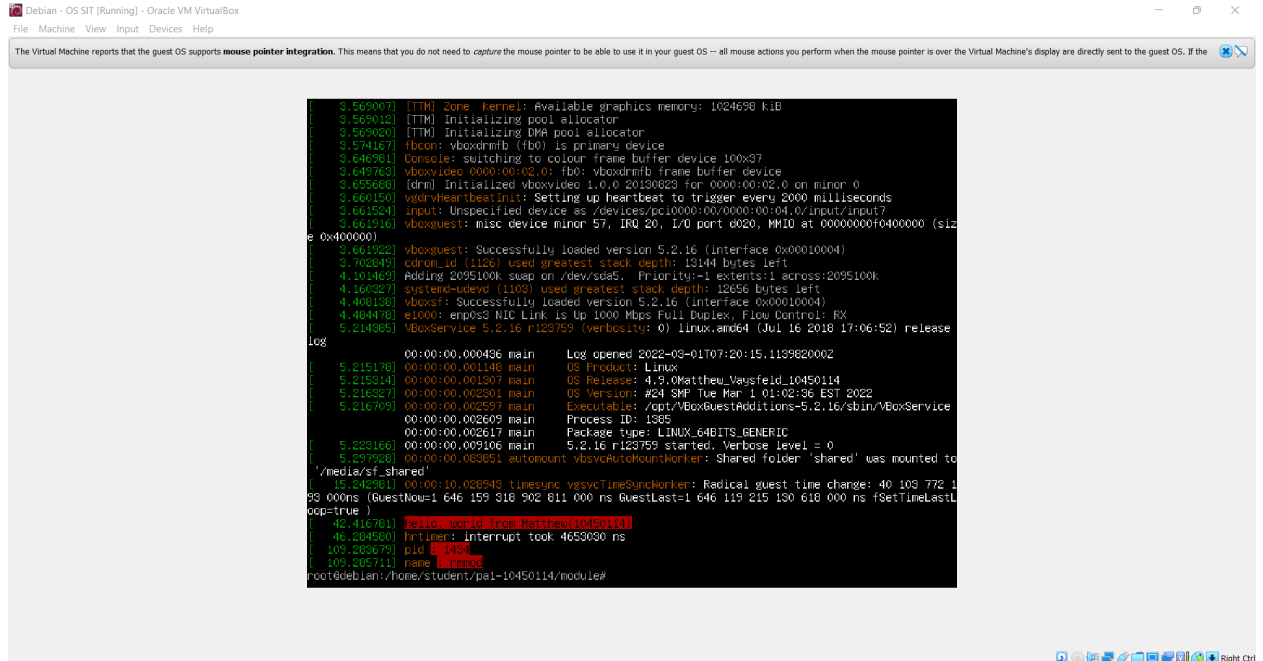
The terminal window is black with white text. The status bar at the bottom of the window shows various icons and the text "Right Click".

```

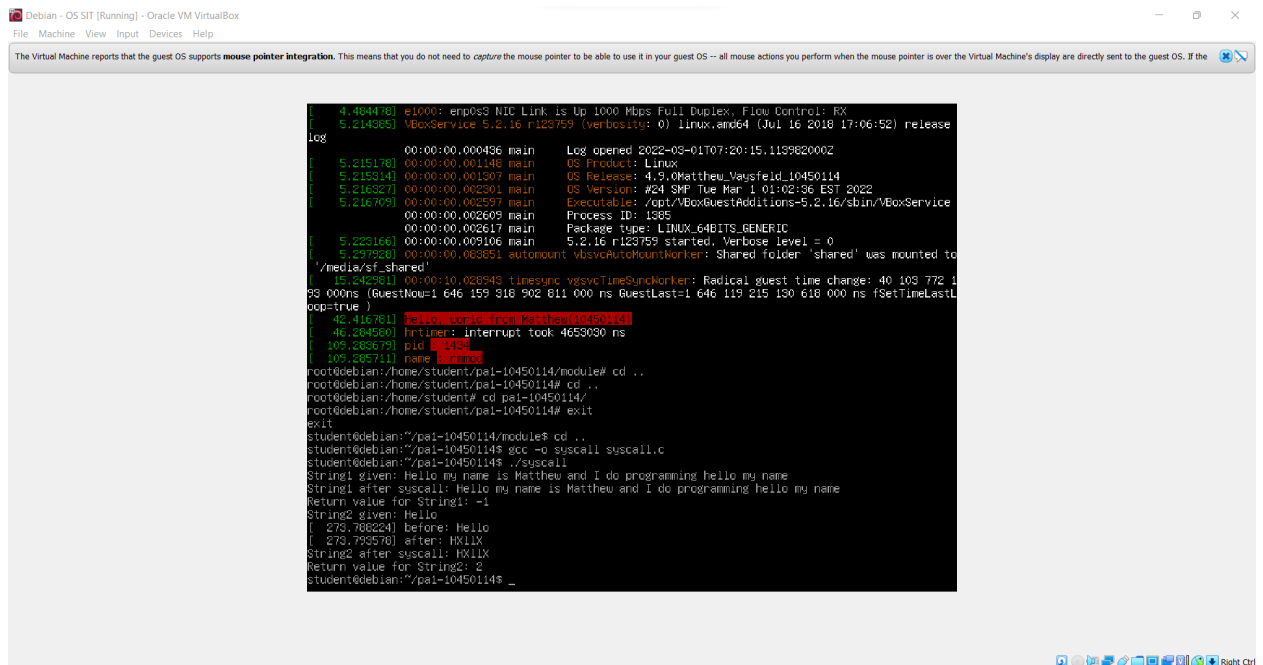
3.563951] vboxvideo: loading out-of-tree module taints kernel.
3.563962] [drm] VRAM 01700000
3.565007] [ITM] Zone kernel: Available graphics memory: 1024698 KiB
3.565012] [ITM] Initializing pool allocator
3.565020] [ITM] Initializing DMA pool allocator
3.574167] fbcon: vboxdmrmb (fb0) is primary device
3.642981] Console: switching to colour frame buffer device 100x37
3.645763] vboxvideo 0000:00:02.0: fb0: vboxdmrmb frame buffer device
3.655608] [drm] Initialized vboxvideo 1.0.0 20130823 for 0000:00:02.0 on minor 0
3.660150] vscrvHeartbeatInit: Setting up heartbeat to trigger every 2000 milliseconds
3.661524] input: Unspecified device as /devices/pci0000:00/0000:00:04.0/input/input7
3.661916] vboxguest: misc device minor 57, IRQ 20, I/O port 0x20, MMIO at 0x000000f0400000 (size 0x4000000)
3.661922] vboxguest: Successfully loaded version 5.2.16 (interface 0x00010004)
3.702049] cgroup_id (1126) used greatest stack depth: 13144 bytes left
4.101469] Adding 2095100k swap on /dev/sda5. Priority:-1 extents:1 across:2095100k
4.160327] systemd-udev (1103) used greatest stack depth: 12656 bytes left
4.406158] vboxsf: Successfully loaded version 5.2.16 (interface 0x00010004)
4.408443] e1000: enp0s3 NIC Link is Up 1000 Mbps Full Duplex, Flow Control: RX
5.214385] VBoxService 5.2.16 r125759 (verbosity: 0) linux.amd64 (Jul 16 2018 17:06:52) release
log
00:00:00.000436 main Log opened 2022-09-01T07:20:15.115982000Z
5.215178] 00:00:00.001146 main OS Product: Linux
5.215314] 00:00:00.001307 main OS Release: 4.3.0-Matthew.Voysfeld.10450114
5.216371] 00:00:00.002501 main OS Version: #24 SMP Tue Mar 1 01:02:36 EST 2022
5.216709] 00:00:00.002557 main Executable: /opt/VBoxGuestAdditions-5.2.16/sbin/VBoxService
00:00:00.002609 main Process ID: 1365
00:00:00.002617 main Package type: LINUX_64BITS_GENERIC
5.223166] 00:00:00.005106 main 5.2.16 r125759 started. Verbose level = 0
5.223280] 00:00:00.005601 autmount vboxdrvchrootWorker: Shared folder 'shared' was mounted to
'/media/sf_shared'
15.245981] 00:00:10.028943 timesync vscvTimeSyncWorker: Radical guest time change: 40 103 772 1
99 000ns (GuestNow=1 646 159 318 902 811 000 ns GuestLast=1 646 119 215 130 618 000 ns fSetTimeLastL
oop=true )
42.416781] [redacted]
46.234580] [redacted]
root@debian:/home/student/pai-10450114/moodle#

```

## Screenshot for e (kernel log after unloading module):



## Screenshot for h (output of userspace c program):



Screenshot for h (kernel log of syscall):

