

嵌入式 u盘linux——准备BusyBox工具

2023年3月20日 8:16

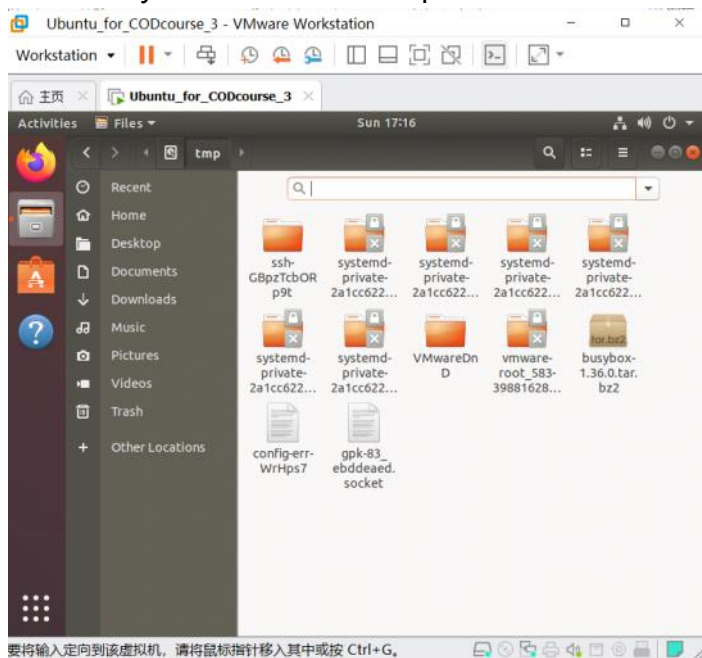
[ubuntu tmp目录大小 51CTO博客](#)

在Ubuntu系统中,在/tmp文件夹里面的内容,每次开机都会被清空,如果不想让他自动清理的话,只需要更改rcS文件中的TMPTIME的值。 我们看如何来修改 `sudo vi /etc/default/rcS`把 T...

51 51CTO博客

tmp目录每次开机启动都会被清空，所以这个教程放在tmp里面真的很迷……

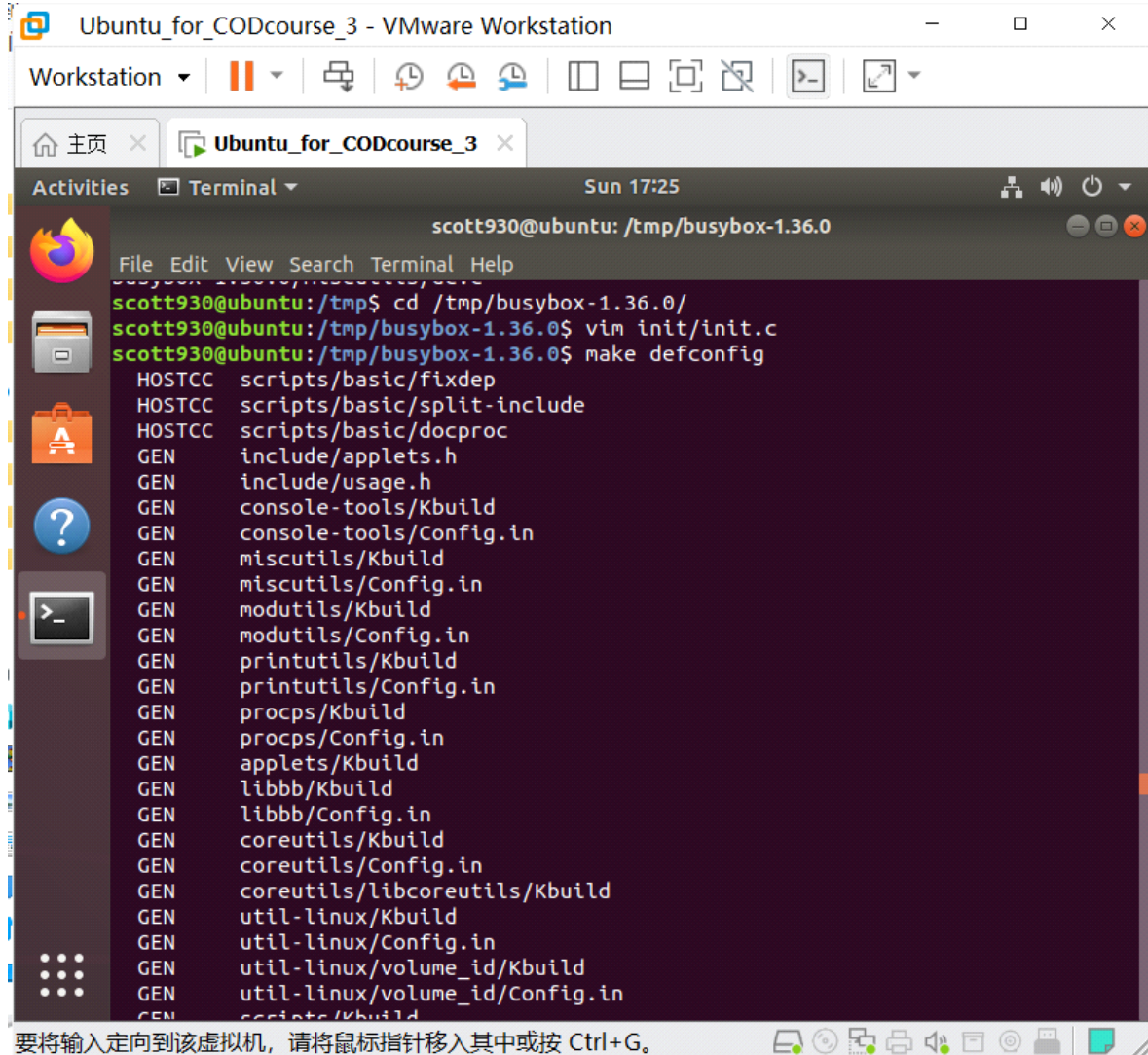
准备好busybox安装包，放入/tmp目录



在/tmp里面解压

改init.c

make



```
scott930@ubuntu: /tmp/busybox-1.36.0
scott930@ubuntu:/tmp$ cd /tmp/busybox-1.36.0/
scott930@ubuntu:/tmp/busybox-1.36.0$ vim init/init.c
scott930@ubuntu:/tmp/busybox-1.36.0$ make defconfig
HOSTCC scripts/basic/fixdep
HOSTCC scripts/basic/split-include
HOSTCC scripts/basic/docproc
GEN include/applets.h
GEN include/usage.h
GEN console-tools/Kbuild
GEN console-tools/Config.in
GEN miscutils/Kbuild
GEN miscutils/Config.in
GEN modutils/Kbuild
GEN modutils/Config.in
GEN printutils/Kbuild
GEN printutils/Config.in
GEN procsps/Kbuild
GEN procsps/Config.in
GEN applets/Kbuild
GEN libbb/Kbuild
GEN libbb/Config.in
GEN coreutils/Kbuild
GEN coreutils/Config.in
GEN coreutils/libcoreutils/Kbuild
GEN util-linux/Kbuild
GEN util-linux/Config.in
GEN util-linux/volume_id/Kbuild
GEN util-linux/volume_id/Config.in
GEN scripts/Kbuild
```

出现错误

```
scott930@ubuntu:/tmp/busybox-1.36.0$ make menuconfig
HOSTLD scripts/kconfig/mconf
HOSTCC scripts/kconfig/lxdialog/checklist.o
<command-line>:0:12: fatal error: curses.h: No such file or directory
compilation terminated.
scripts/Makefile.host:120: recipe for target 'scripts/kconfig/lxdialog/checklist.o' failed
make[2]: *** [scripts/kconfig/lxdialog/checklist.o] Error 1
/tmp/busybox-1.36.0/scripts/kconfig/Makefile:14: recipe for target 'menuconfig' failed
make[1]: *** [menuconfig] Error 2
Makefile:443: recipe for target 'menuconfig' failed
make: *** [menuconfig] Error 2
```

查询教程 ([Linux内核开发_1_编译Linux内核 - 腾讯云开发者社区-腾讯云 \(tencent.com\)](#))

报了一个错误信息:

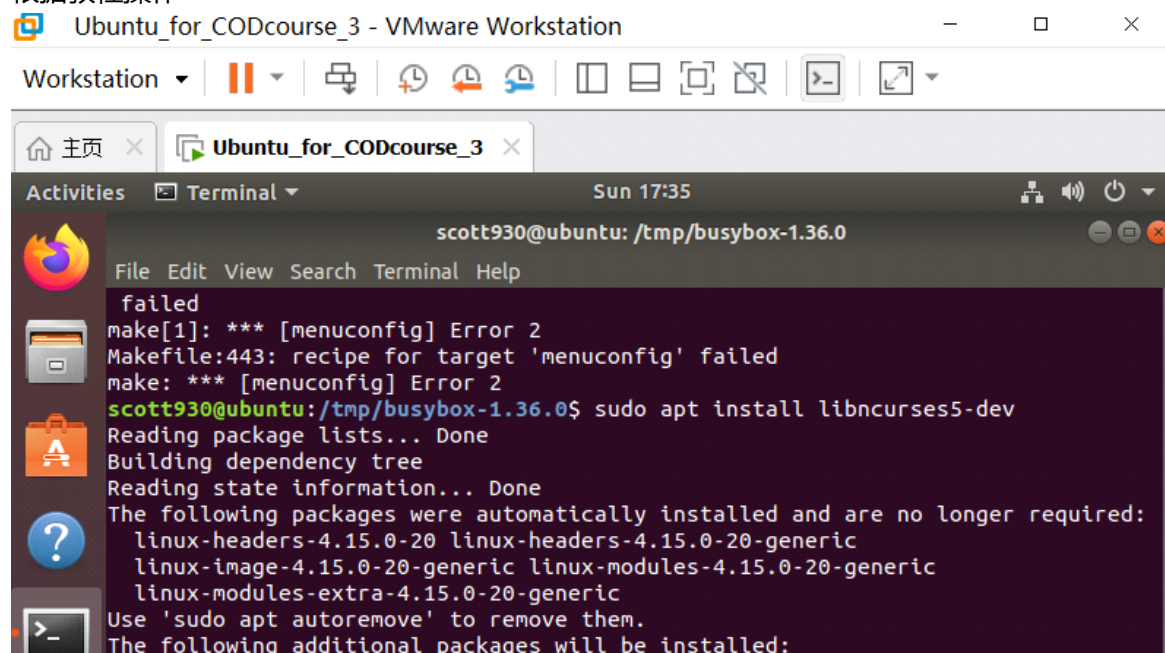
“<command-line>:0:12: fatal error: curses.h: No such file or directory”

提示找不到curses.h, 这个是menu里的库文件, 这很明显告诉我们缺少menu的库

所以这里我们安装一下:

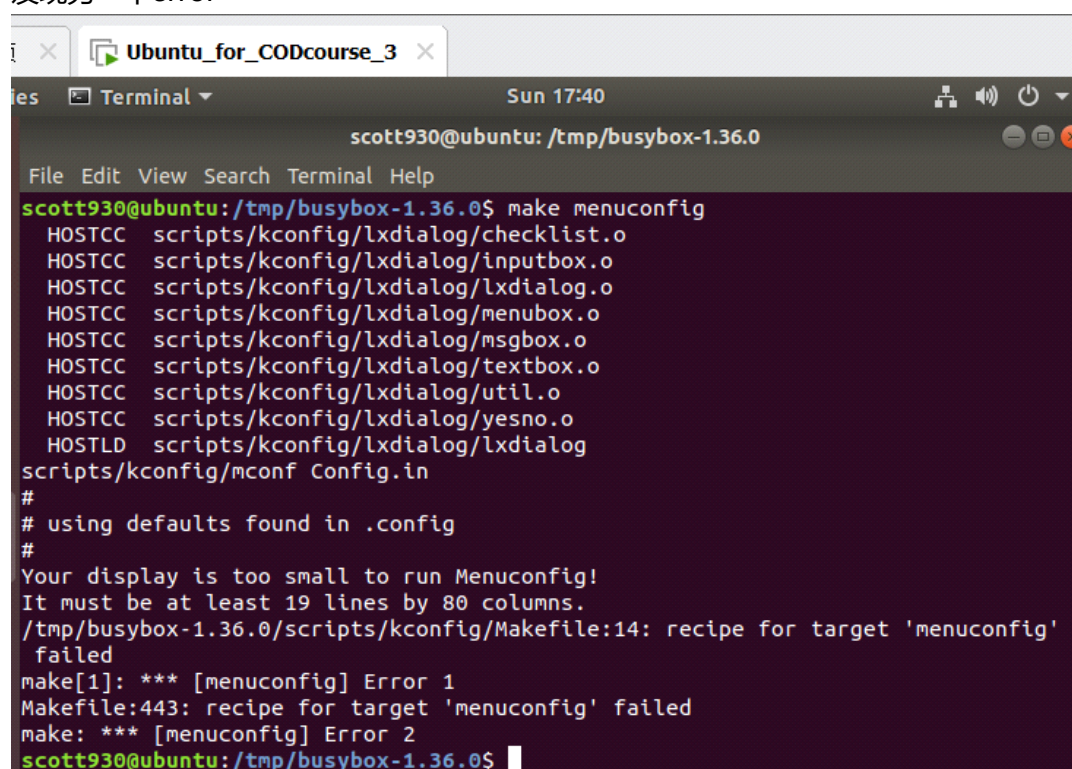
```
1 | sudo apt install libncurses5-dev
```


根据教程操作



```
scott930@ubuntu: /tmp/busybox-1.36.0
failed
make[1]: *** [menuconfig] Error 2
Makefile:443: recipe for target 'menuconfig' failed
make: *** [menuconfig] Error 2
scott930@ubuntu:/tmp/busybox-1.36.0$ sudo apt install libncurses5-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
linux-headers-4.15.0-20 linux-headers-4.15.0-20-generic
linux-image-4.15.0-20-generic linux-modules-4.15.0-20-generic
linux-modules-extra-4.15.0-20-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
```

发现另一个error



```
scott930@ubuntu:/tmp/busybox-1.36.0$ make menuconfig
HOSTCC scripts/kconfig/lxdialog/checklist.o
HOSTCC scripts/kconfig/lxdialog/inputbox.o
HOSTCC scripts/kconfig/lxdialog/lxdialog.o
HOSTCC scripts/kconfig/lxdialog/menubox.o
HOSTCC scripts/kconfig/lxdialog/msgbox.o
HOSTCC scripts/kconfig/lxdialog/textbox.o
HOSTCC scripts/kconfig/lxdialog/util.o
HOSTCC scripts/kconfig/lxdialog/yesno.o
HOSTLD scripts/kconfig/lxdialog/lxdialog
scripts/kconfig/mconf Config.in
#
# using defaults found in .config
#
Your display is too small to run Menuconfig!
It must be at least 19 lines by 80 columns.
/tmp/busybox-1.36.0/scripts/kconfig/Makefile:14: recipe for target 'menuconfig'
failed
make[1]: *** [menuconfig] Error 1
Makefile:443: recipe for target 'menuconfig' failed
make: *** [menuconfig] Error 2
scott930@ubuntu:/tmp/busybox-1.36.0$
```

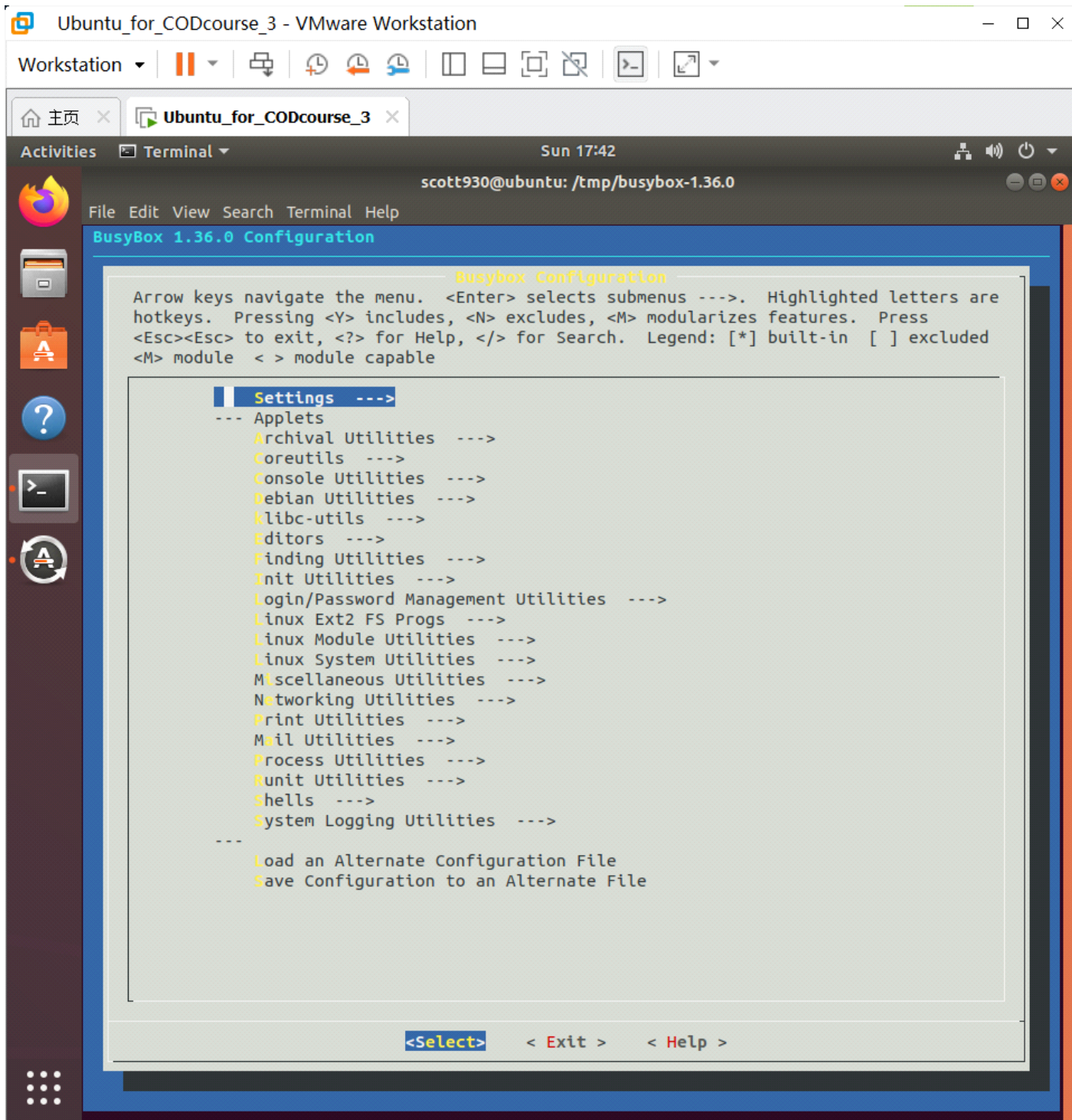
还是刚才的教程

“Your display is too small to run Menuconfig!

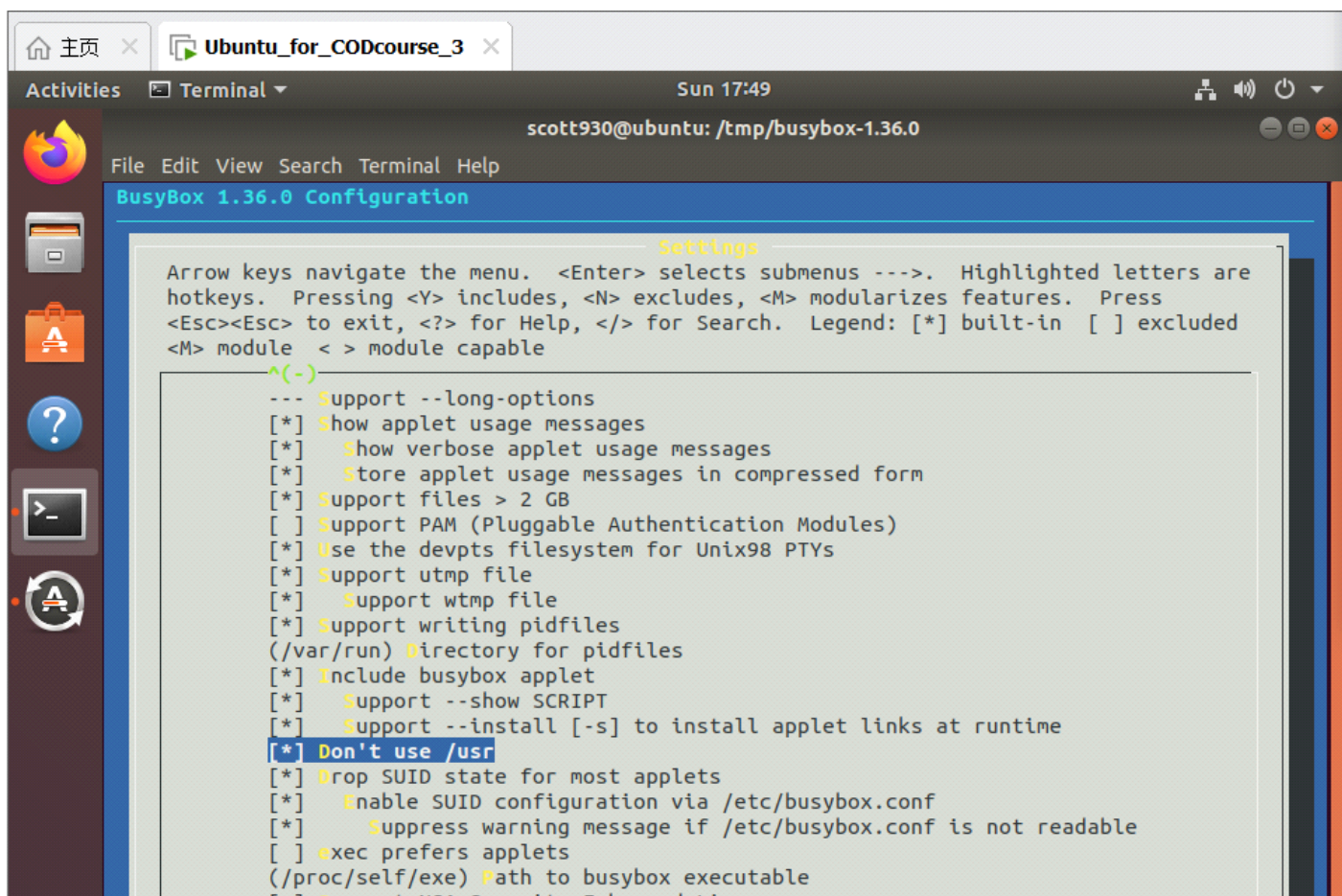
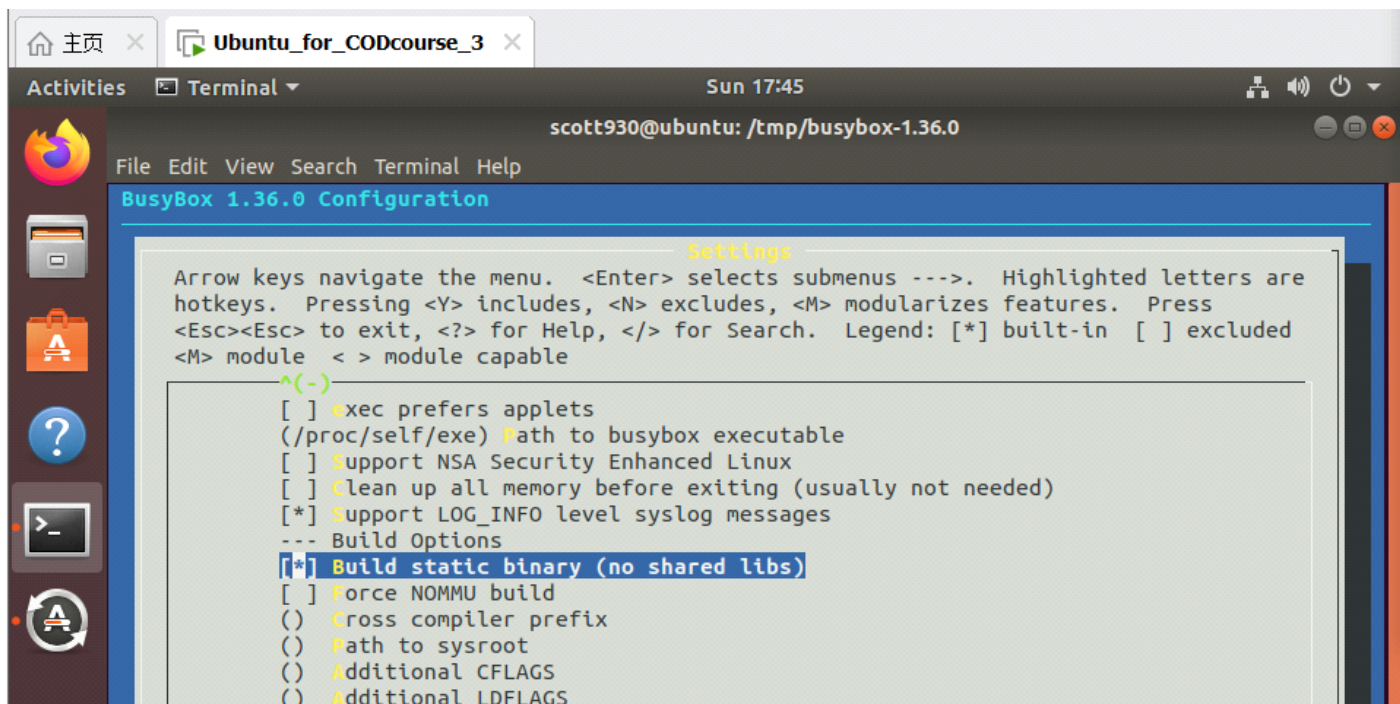
It must be at least 19 lines by 80 columns.

scripts/kconfig/Makefile:28: recipe for target 'menuconfig' failed”

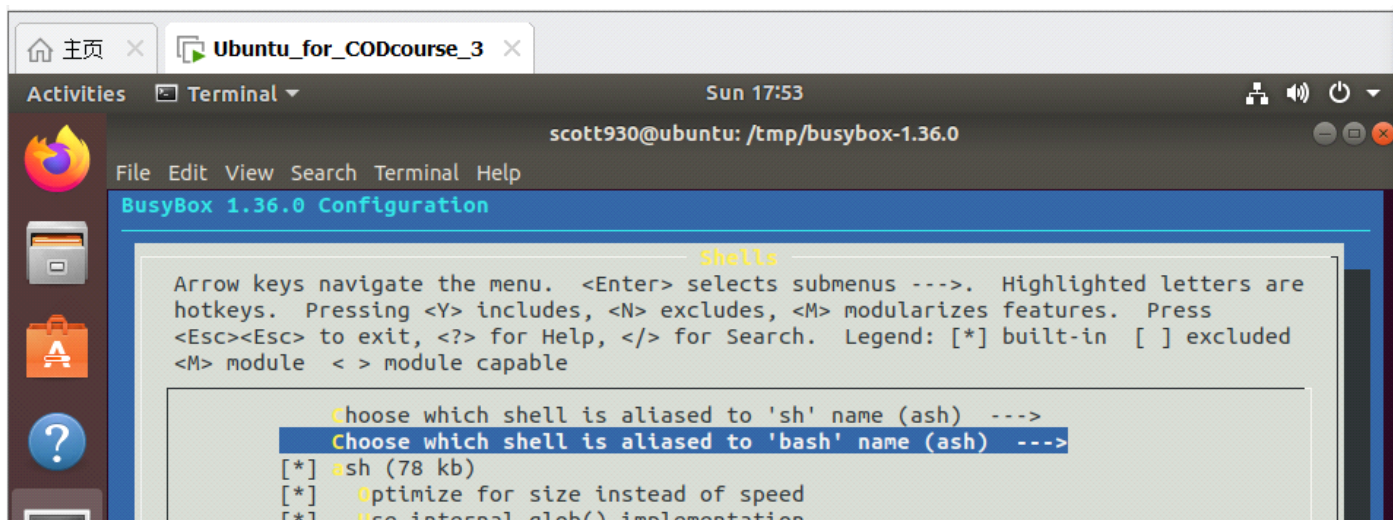
意思是，这个配置工具在编写时对我们的终端窗口大小进行了限制，长和宽必须满足19*80
把窗口调大点，好力



按enter进入settings, 改选项

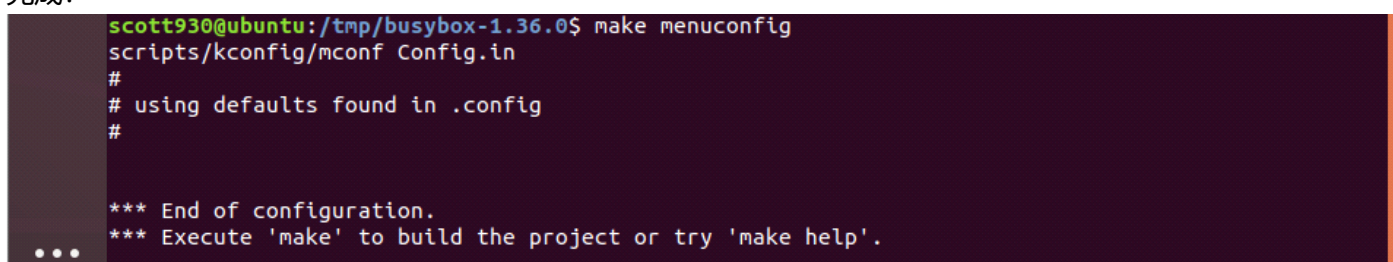


(↑↑注：对于1.36版的busybox，此处是在support --long-options里)

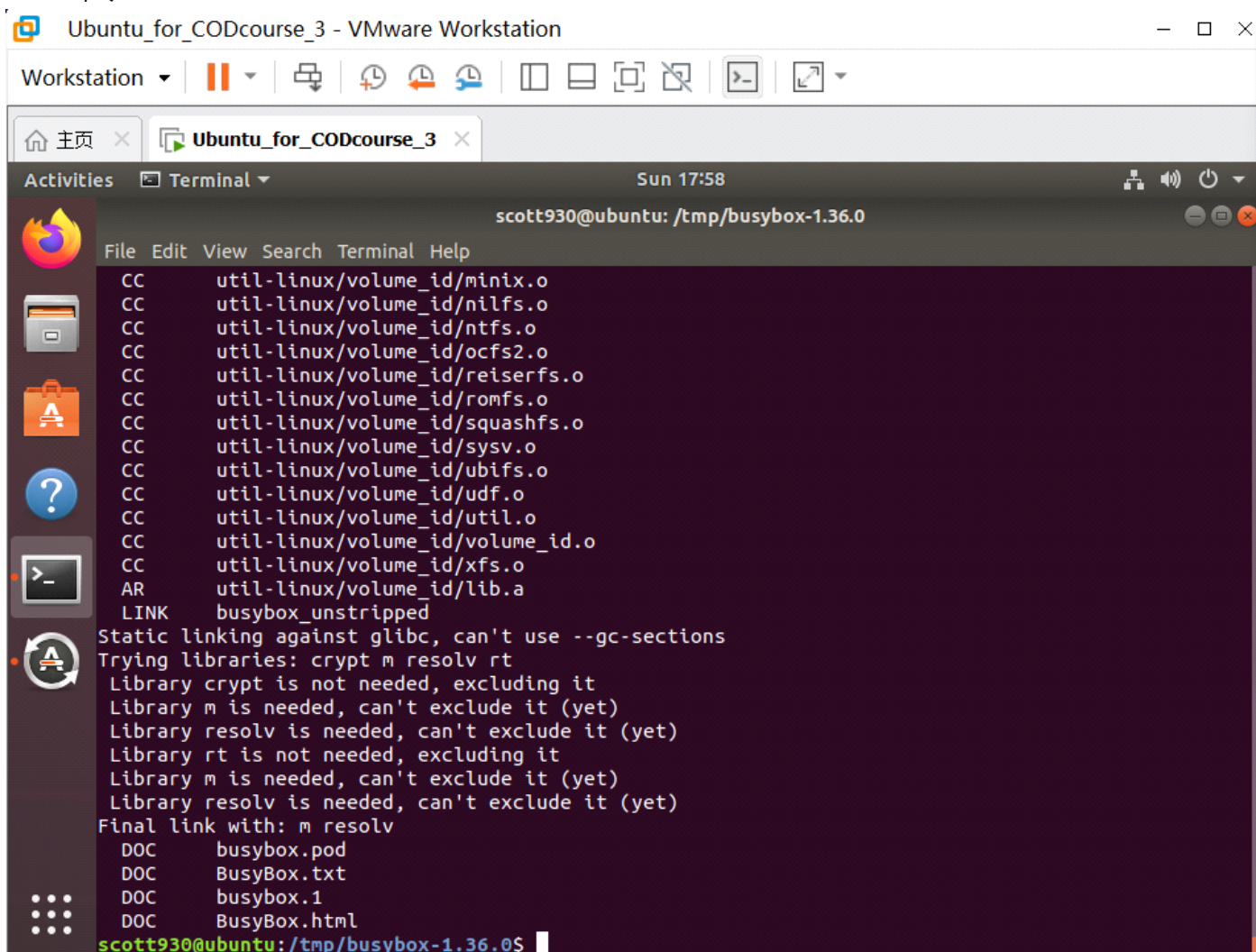


(↑↑注：没有教材上的choose default shell，姑且把这里改成ash，原本是none)

完成：

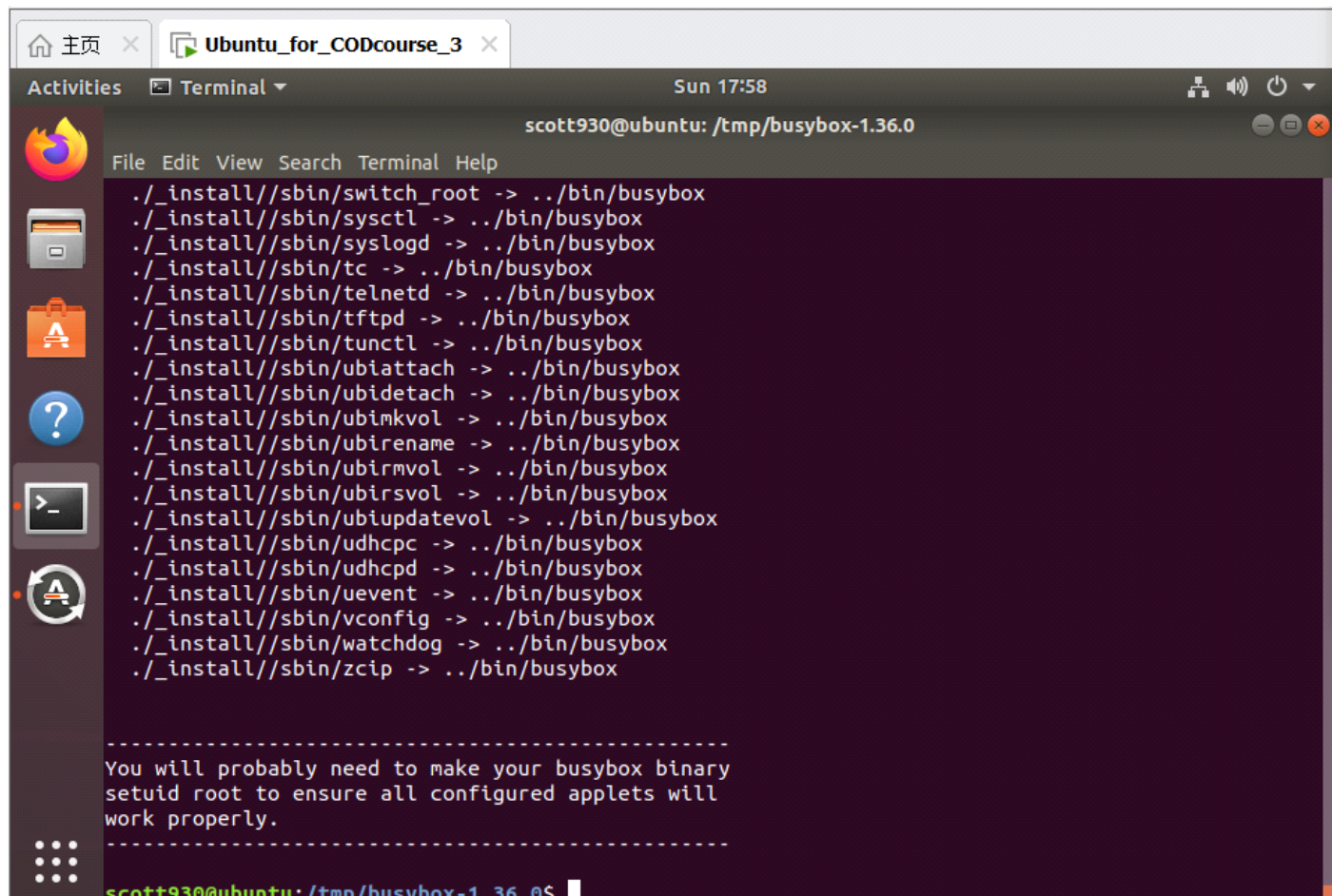


make命令：



要将输入定向到该虚拟机，请将鼠标指针移入其中或按 Ctrl+G。

make install



```
scott930@ubuntu: /tmp/busybox-1.36.0
File Edit View Search Terminal Help
./_install/sbin/switch_root -> ../bin/busybox
./_install/sbin/sysctl -> ../bin/busybox
./_install/sbin/syslogd -> ../bin/busybox
./_install/sbin/tc -> ../bin/busybox
./_install/sbin/telnetd -> ../bin/busybox
./_install/sbin/tftpd -> ../bin/busybox
./_install/sbin/tunctl -> ../bin/busybox
./_install/sbin/ubiattach -> ../bin/busybox
./_install/sbin/ubidetach -> ../bin/busybox
./_install/sbin/ubimkvol -> ../bin/busybox
./_install/sbin/ubirename -> ../bin/busybox
./_install/sbin/ubirmvol -> ../bin/busybox
./_install/sbin/ubirsvol -> ../bin/busybox
./_install/sbin/ubiupdatevol -> ../bin/busybox
./_install/sbin/udhcpc -> ../bin/busybox
./_install/sbin/udhcpd -> ../bin/busybox
./_install/sbin/uevent -> ../bin/busybox
./_install/sbin/vconfig -> ../bin/busybox
./_install/sbin/watchdog -> ../bin/busybox
./_install/sbin/zcip -> ../bin/busybox

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You will probably need to make your busybox binary
setuid root to ensure all configured applets will
work properly.
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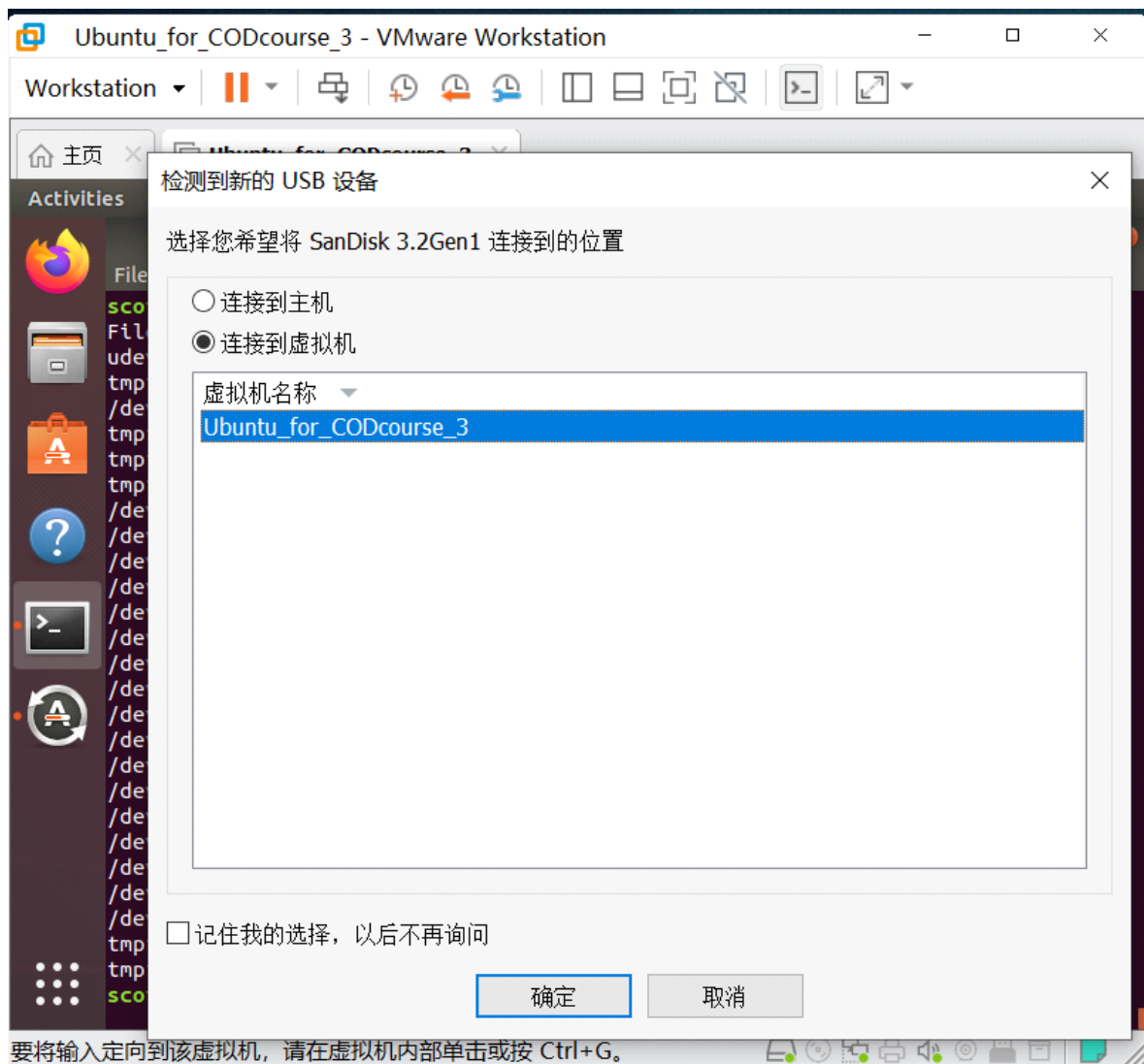
scott930@ubuntu: /tmp/busybox-1.36.0$
```

要将输入定向到该虚拟机，请将鼠标指针移入其中或按 Ctrl+G。

生成了_install目录

```
scott930@ubuntu: /tmp/busybox-1.36.0$ ls -ld _install
drwxrwxr-x 4 scott930 scott930 4096 Mar 19 17:58 _install
```

在打开虚拟机客户端的情况下插入u盘



要将输入定向到该虚拟机，请在虚拟机内部单击或按 Ctrl+G。

最下面一行，sdb1，显示成功连上

Ubuntu_for_CODcourse_3 - VMware Workstation

Workstation

Ubuntu_for_CODcourse_3

Activities Terminal Sun 17:39

scott930@ubuntu: /tmp/busybox-1.36.0

```
File Edit View Search Terminal Help
/dev/loop15      144128    144128      0 100% /snap/gnome-3-26-1604/104
/dev/loop16       2688      2688      0 100% /snap/gnome-calculator/920
tmpfs            401324     16    401308    1% /run/user/120
tmpfs            401324     48    401276    1% /run/user/1000
scott930@ubuntu: /tmp/busybox-1.36.0$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            1974136      0   1974136   0% /dev
tmpfs           401328     2060   399268    1% /run
/dev/sda1       30785444 20222096   8974204   70% /
tmpfs           2006620      0   2006620   0% /dev/shm
tmpfs           5120         4     5116    1% /run/lock
tmpfs           2006620      0   2006620   0% /sys/fs/cgroup
/dev/loop0       354688    354688      0 100% /snap/gnome-3-38-2004/119
/dev/loop1        512       512      0 100% /snap/gnome-characters/781
/dev/loop2       21504     21504      0 100% /snap/gnome-logs/25
/dev/loop3       143488    143488      0 100% /snap/gnome-3-26-1604/59
/dev/loop4       93952     93952      0 100% /snap/gtk-common-themes/1535
/dev/loop5       1536      1536      0 100% /snap/gnome-system-monitor/181
/dev/loop6      457088    457088      0 100% /snap/gnome-42-2204/44
/dev/loop7        128       128      0 100% /snap/bare/5
/dev/loop8      117760    117760      0 100% /snap/core/14056
/dev/loop9        768       768      0 100% /snap/gnome-logs/115
/dev/loop10     74624     74624      0 100% /snap/core22/310
/dev/loop11      3456      3456      0 100% /snap/gnome-system-monitor/36
/dev/loop12     64768     64768      0 100% /snap/core20/1695
/dev/loop13      1664      1664      0 100% /snap/gnome-calculator/154
/dev/loop14     12544     12544      0 100% /snap/gnome-characters/69
/dev/loop15     144128    144128      0 100% /snap/gnome-3-26-1604/104
/dev/loop16       2688      2688      0 100% /snap/gnome-calculator/920
tmpfs           401324     16    401308    1% /run/user/120
tmpfs           401324     52    401272    1% /run/user/1000
/dev/sdb1       30029472   64 30029408    1% /media/scott930/AEC8-5BD5
scott930@ubuntu: /tmp/busybox-1.36.0$
```

要将输入定向到该虚拟机，请将鼠标指针移入其中或按 Ctrl+G。