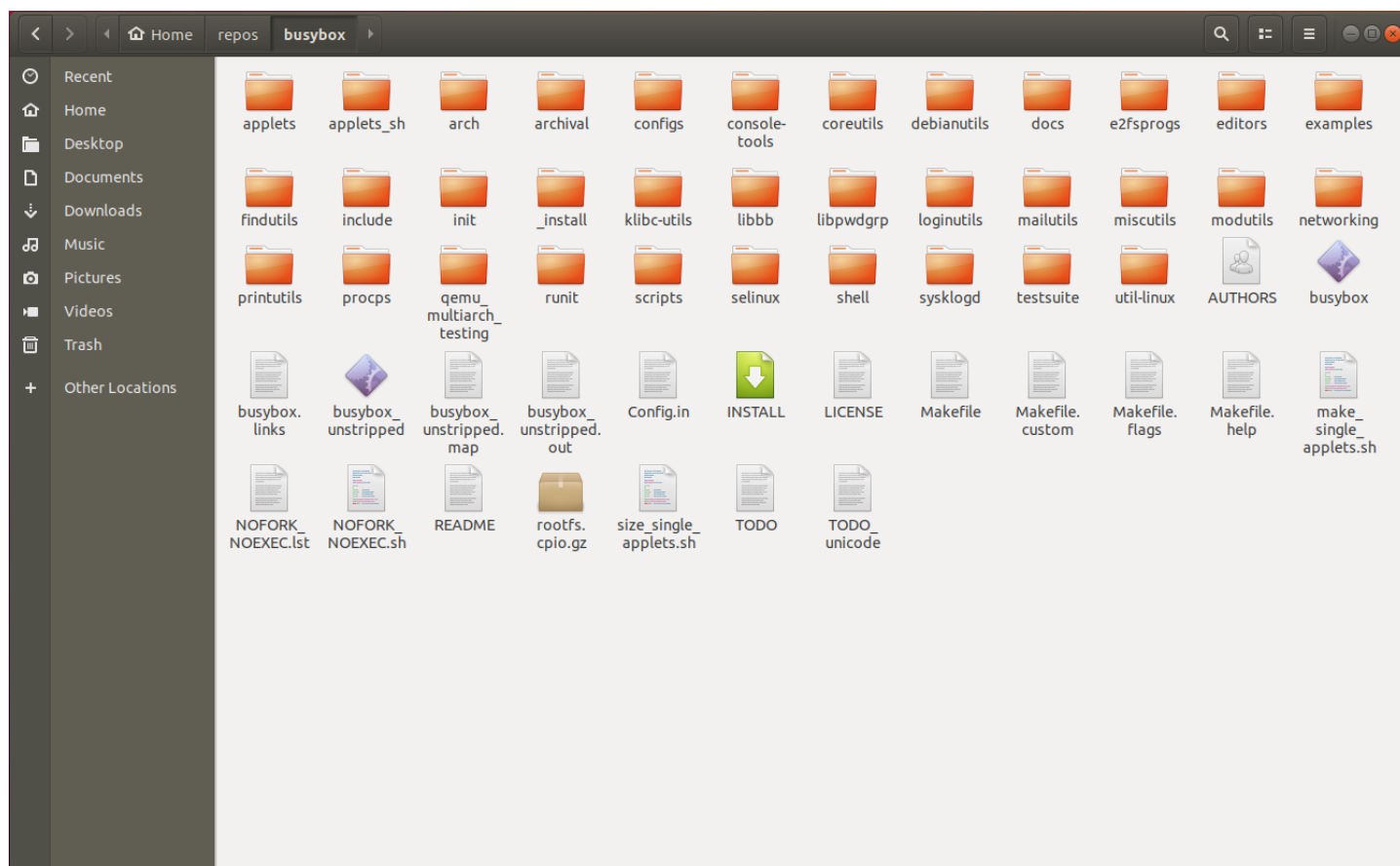
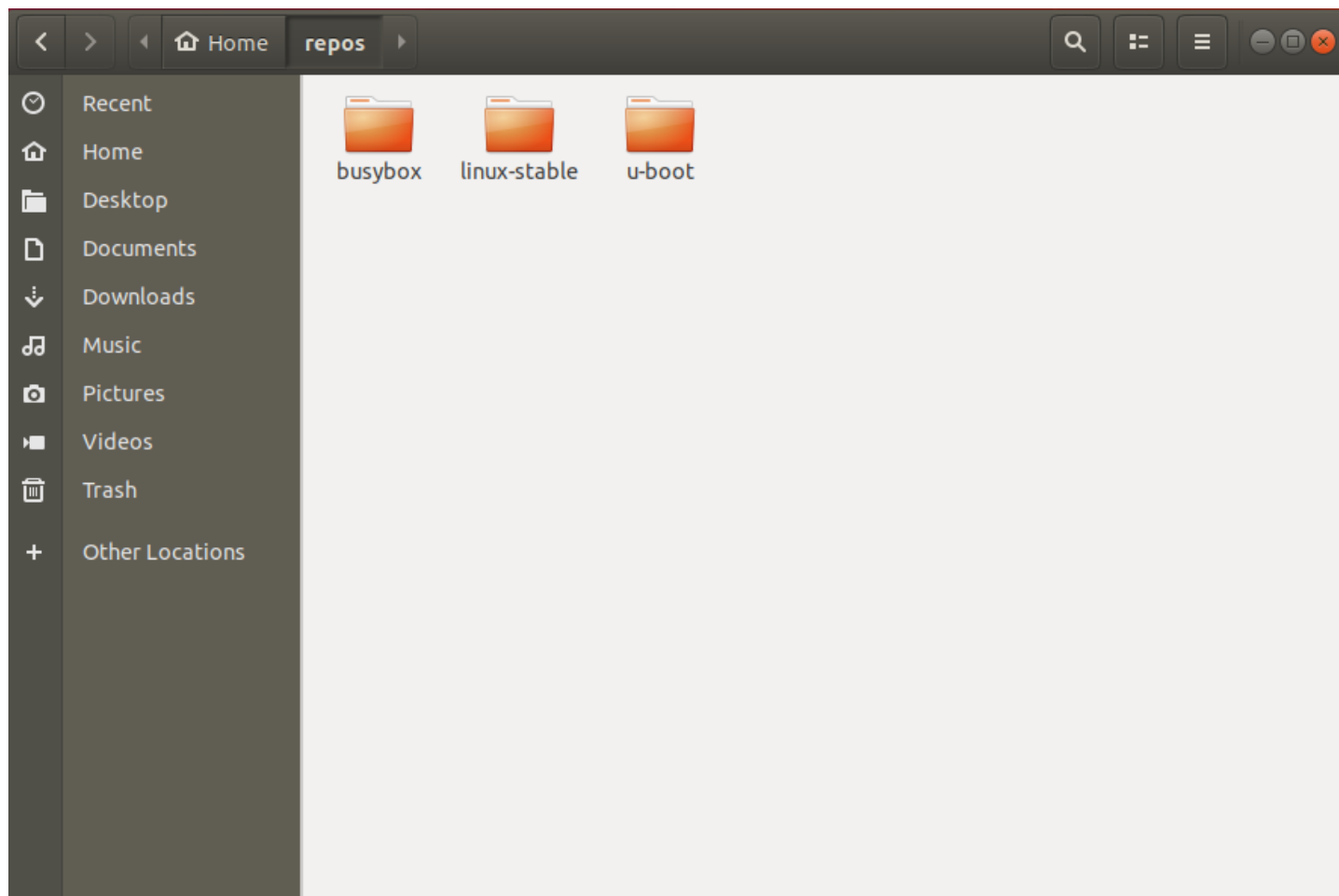


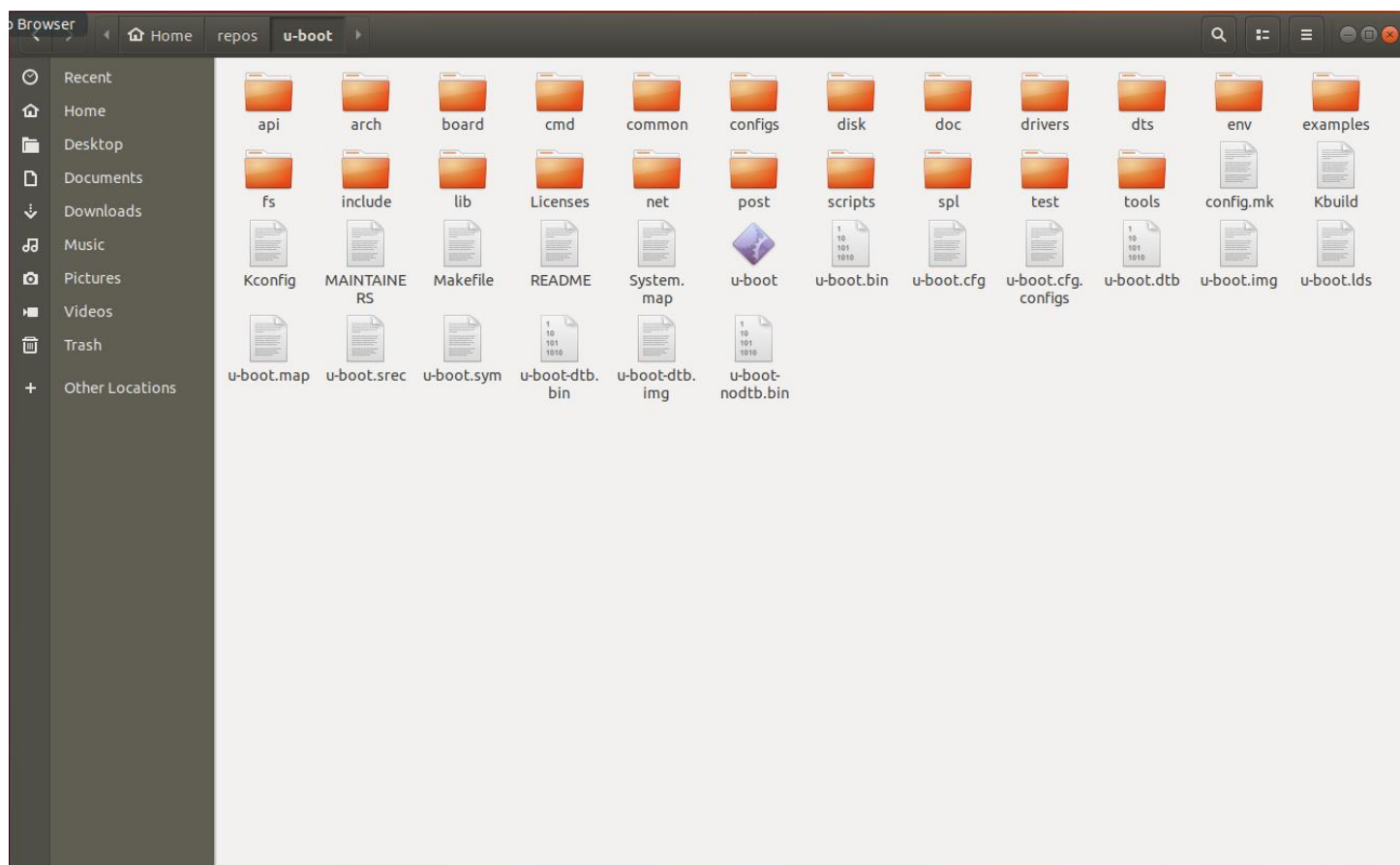
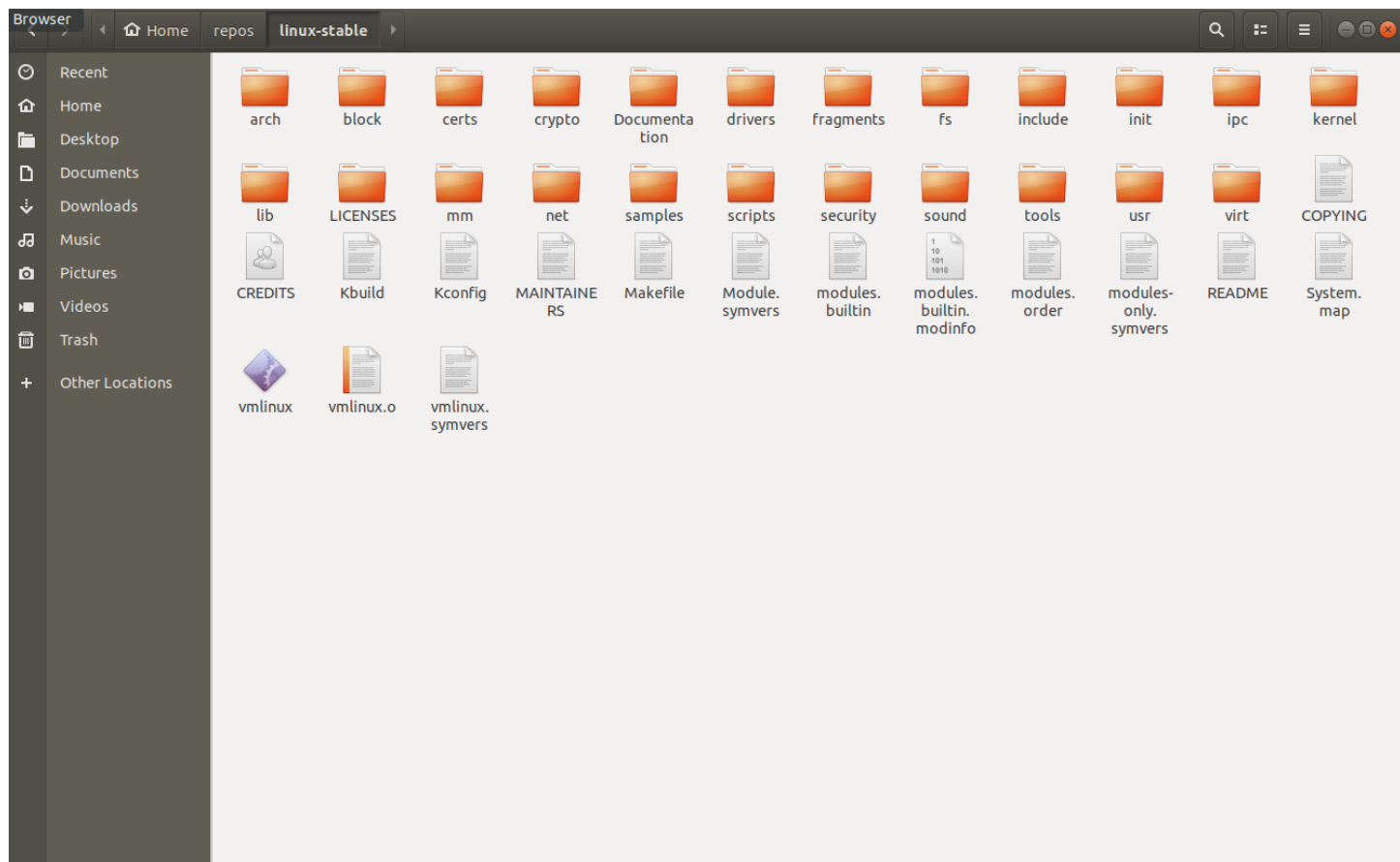
Національний технічний університет України
«Київський політехнічний інститут імені Ігоря Сікорського»
Факультет інформатики та обчислювальної техніки
Кафедра обчислювальної техніки

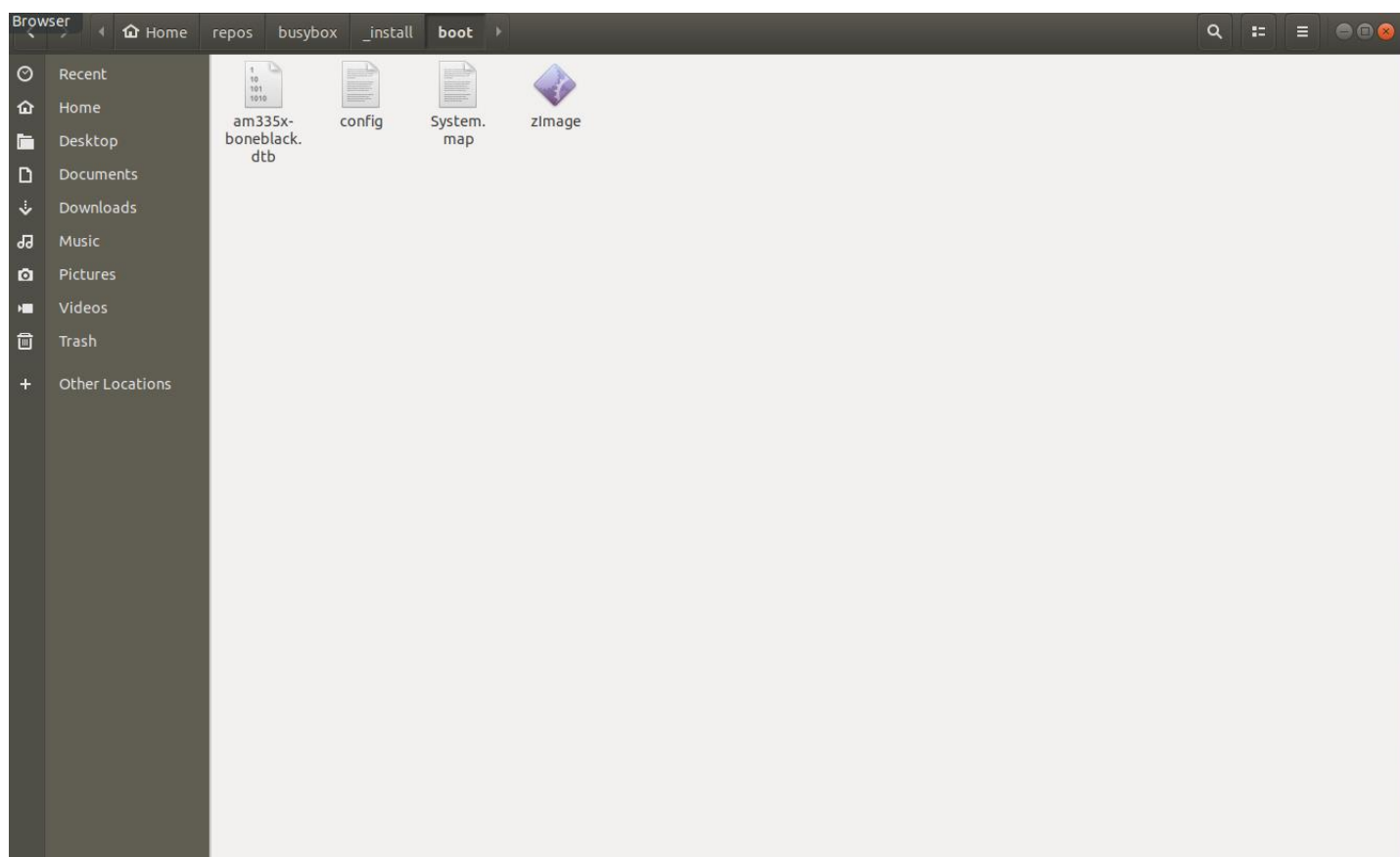
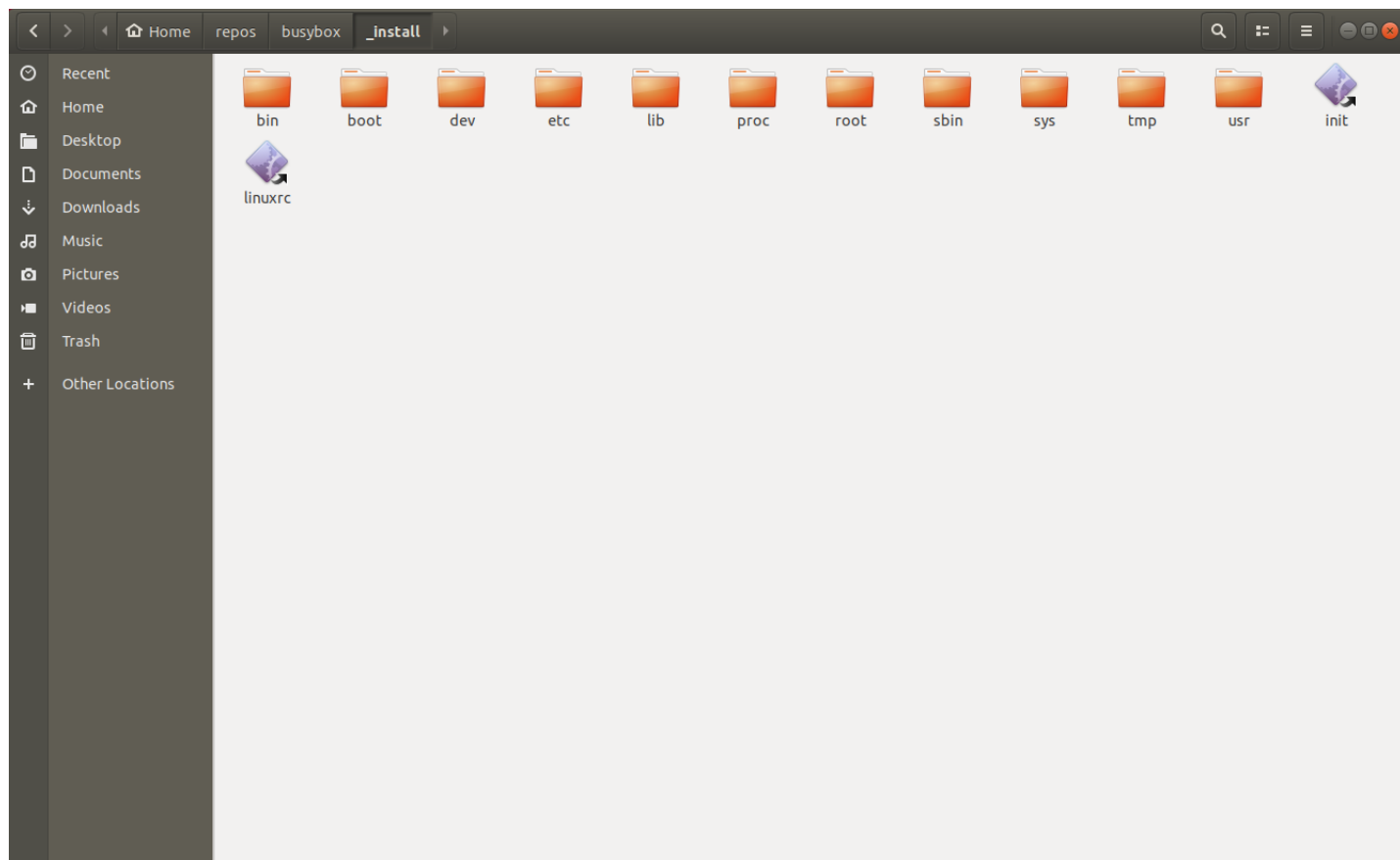
Архітектура комп'ютерів-2. Процесори
Лабораторна робота №4

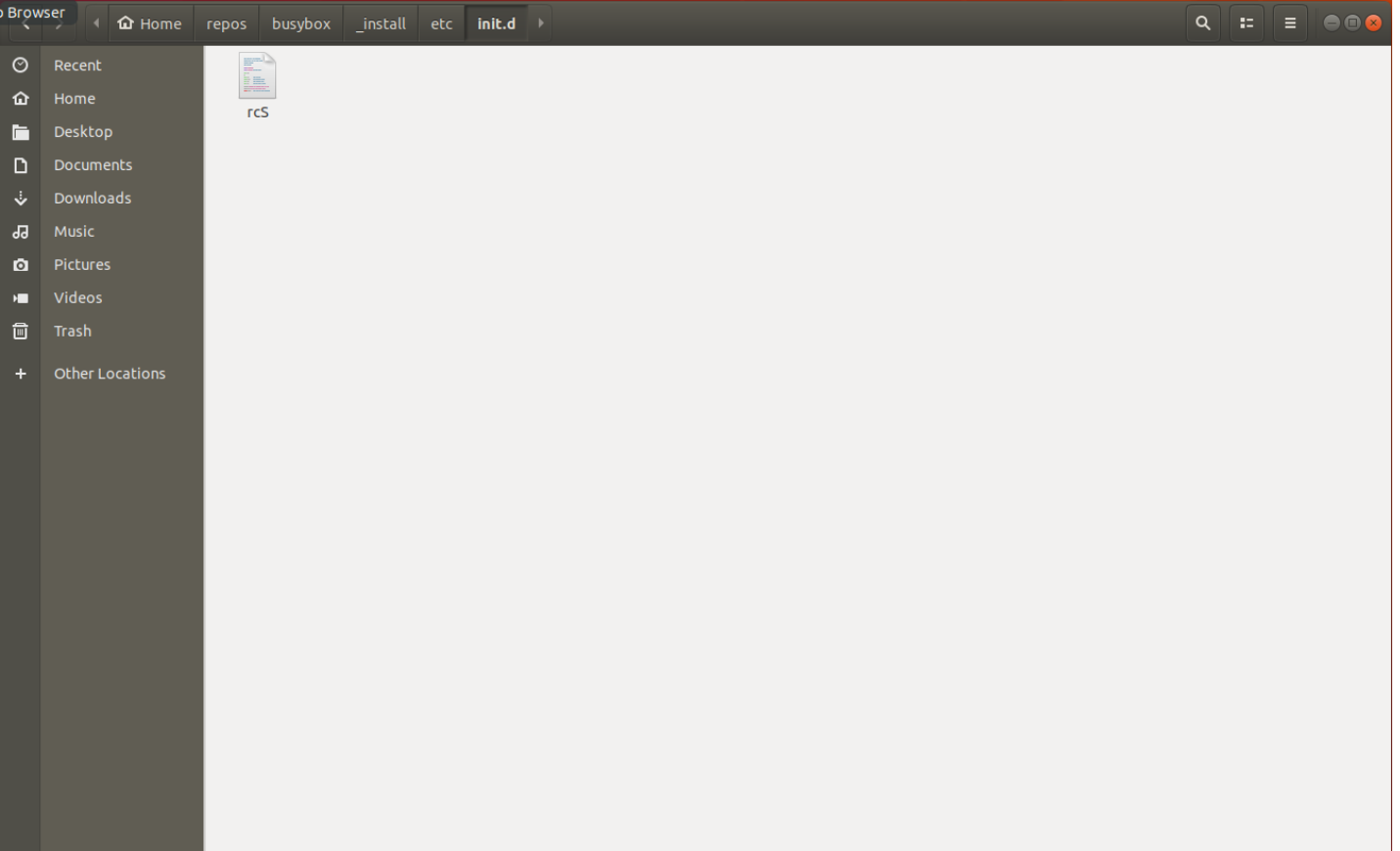
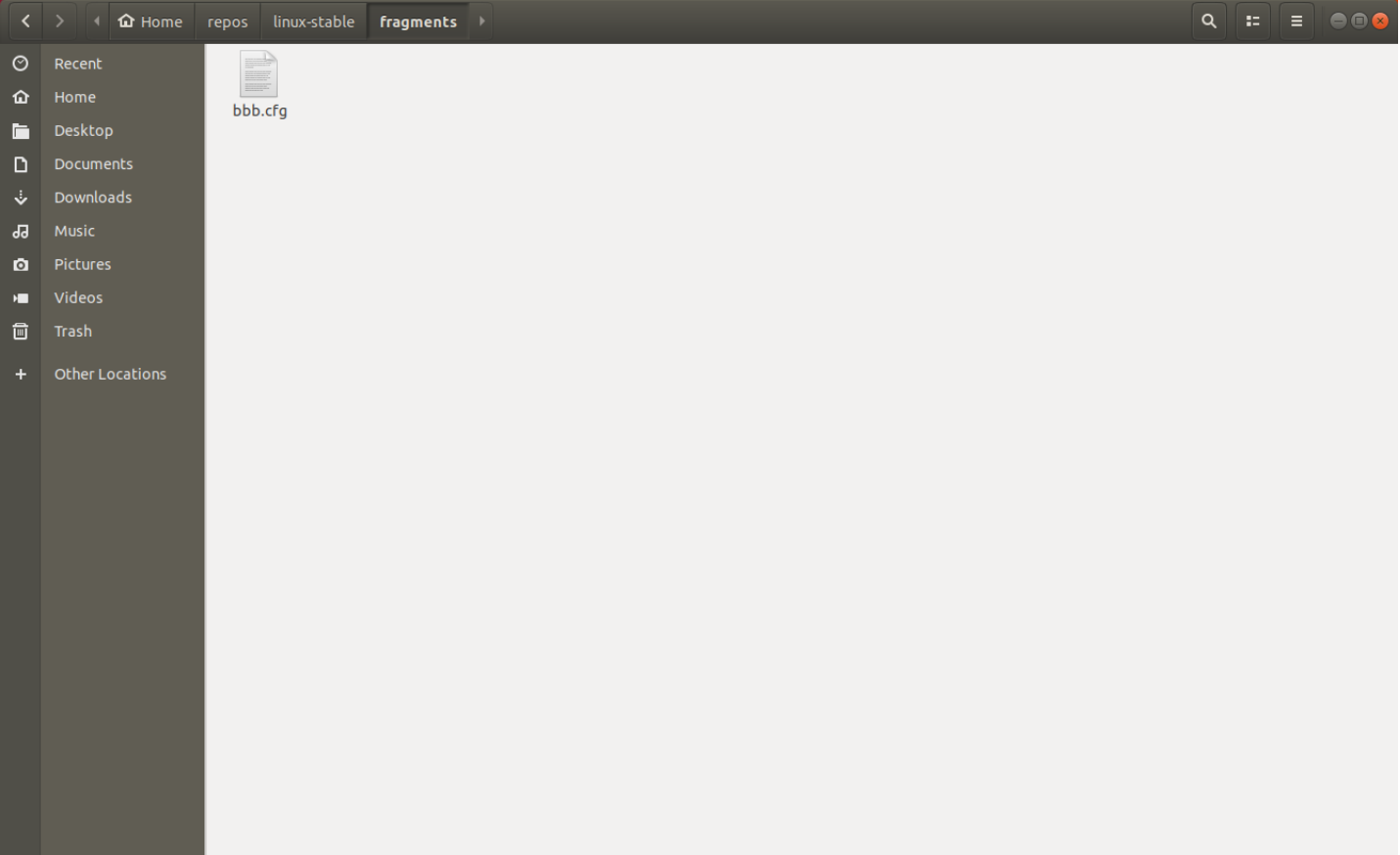
Виконав:
студент групи ІВ-91
Липчак Дмитро
Перевірив:
пос. Нікольський С. С.

Київ 2021 р









Please press Enter to activate this console.

```
/ # uname -a
```

```
Linux (none) 5.10.84 #1 SMP Wed Dec 8 09:29:48 PST 2021 armv7l GNU/Linux
```

```
/ # ls -l
```

```
total 0
```

drwxrwxr-x	2	1000	1000	0	Dec	8	18:48	bin
drwxrwxr-x	2	1000	1000	0	Dec	8	18:52	boot
drwxrwxr-x	3	1000	1000	0	Dec	8	19:00	dev
drwxrwxr-x	3	1000	1000	0	Dec	8	18:55	etc
lrwxrwxrwx	1	1000	1000	11	Dec	8	18:52	init -> bin/busybox
drwxrwxr-x	3	1000	1000	0	Dec	8	18:54	lib
lrwxrwxrwx	1	1000	1000	11	Dec	8	18:48	linuxrc -> bin/busybox
dr-xr-xr-x	88	root	root	0	Dec	8	19:00	proc
drwxrwxr-x	2	1000	1000	0	Dec	8	18:49	root
drwxrwxr-x	2	1000	1000	0	Dec	8	18:48	sbin
dr-xr-xr-x	12	root	root	0	Dec	8	19:00	sys
drwxrwxr-x	2	1000	1000	0	Dec	8	18:49	tmp
drwxrwxr-x	4	1000	1000	0	Dec	8	18:48	usr

```
/ # dmesg | grep init
```

```
[ 0.000000] mem auto-init: stack:off, heap alloc:off, heap free:off
[ 0.000000] Memory: 400800K/524288K available (13312K kernel code, 2258K
rdata, 5456K rodata, 2048K init, 426K bss, 57952K reserved, 65536K cma-re
served, 0K highmem)
[ 0.000000] random: get_random_bytes called from start_kernel+0x388/0x52
8 with crng_init=0
[ 0.043714] devtmpfs: initialized
[ 0.070940] pinctrl core: initialized pinctrl subsystem
[ 0.247125] SCSI subsystem initialized
[ 1.026945] Trying to unpack rootfs image as initramfs...
[ 2.485782] Freeing initrd memory: 28944K
[ 2.505976] nfs4filelayout_init: NFSv4 File Layout Driver Registering...
[ 2.506317] nfs4flexfilelayout_init: NFSv4 Flexfile Layout Driver Regist
ering...
[ 2.677530] SuperH (H)SCI(F) driver initialized
[ 2.678956] msm_serial: driver initialized
[ 2.679313] STMicroelectronics ASC driver initialized
[ 2.680851] STM32 USART driver initialized
[ 4.957319] Run /init as init process
[ 4.957766] /init
```

```
/ # busybox --help | head -15
```

```
BusyBox v1.34.1 (2021-12-08 10:46:33 PST) multi-call binary.
```

```
BusyBox is copyrighted by many authors between 1998-2015.
```

```
BusyBox v1.34.1 (2021-12-08 10:46:33 PST) multi-call binary.  
BusyBox is copyrighted by many authors between 1998-2015.  
Licensed under GPLv2. See source distribution for detailed  
copyright notices.
```

```
Usage: busybox [function [arguments]...]  
or: busybox --list[-full]  
or: busybox --show SCRIPT  
or: busybox --install [-s] [DIR]  
or: function [arguments]...
```

```
    BusyBox is a multi-call binary that combines many common Unix  
    utilities into a single executable.  Most people will create a  
    link to busybox for each function they wish to use and BusyBox  
    will act like whatever it was invoked as.
```

```
/ #
```

```
/ # poweroff  
/ # umount: can't unmount /: Invalid argument  
swapoff: can't open '/etc/fstab': No such file or directory  
The system is going down NOW!  
Sent SIGTERM to all processes  
Sent SIGKILL to all processes  
Requesting system poweroff  
[ 350.765426] Flash device refused suspend due to active operation (state  
20)  
[ 350.765707] Flash device refused suspend due to active operation (state  
20)  
[ 350.766146] reboot: Power down  
dmch@ubuntu:~/repos/busybox$
```