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ЛАБОРАТОРНА РОБОТА № 4

з дисципліни

«Архітектура комп'ютерів – 2 . Процесори»

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ПЕРЕВІРИВ:
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ubuntu [Роботаєт] - Oracle VM VirtualBox
Діяльність Термінал 9 22:06 en
bohdan@bohdan-VirtualBox: ~/repos/busybox

[ 5.761803] Key type dns_resolver registered
[ 5.773719] ThumbEE CPU extension supported.
[ 5.775677] Registering SWP/SWPB emulation handler
[ 5.793263] Loading compiled-in X.509 certificates
[ 5.859053] input: gpio-keys as /devices/platform/gpio-keys/input/input0
[ 5.874727] rtc-pl031 9010000.pl031: setting system clock to 2021-12-09 19:45:50 UTC (1639079150)
[ 5.904509] uart-pl011 9000000.pl011: no DMA platform data
[ 6.438419] Freeing unused kernel memory: 2048K
[ 6.463614] Run /init as init process

Please press Enter to activate this console.
/ # uname -a
Linux (none) 4.19.220 #1 SMP Thu Dec 9 19:01:44 EET 2021 armv7l GNU/Linux
/ # ls -l
total 0
drwxrwxr-x 2 1000 1000 0 Dec 9 18:53 bin
drwxrwxr-x 2 1000 1000 0 Dec 9 19:26 boot
drwxrwxr-x 3 1000 1000 0 Dec 9 19:45 dev
drwxrwxr-x 3 1000 1000 0 Dec 9 19:39 etc
lrwxrwxrwx 1 1000 1000 11 Dec 9 19:15 init -> bin/busybox
drwxrwxr-x 3 1000 1000 0 Dec 9 19:33 lib
lrwxrwxrwx 1 1000 1000 11 Dec 9 18:53 linuxrc -> bin/busybox
dr-xr-xr-x 90 root root 0 Jan 1 1970 proc
drwxrwxr-x 2 1000 1000 0 Dec 9 18:55 root
drwxrwxr-x 2 1000 1000 0 Dec 9 18:53 sbin
dr-xr-xr-x 12 root root 0 Dec 9 19:45 sys
drwxrwxr-x 2 1000 1000 0 Dec 9 18:55 tmp
drwxrwxr-x 4 1000 1000 0 Dec 9 18:53 usr
```

```
ubuntu [Роботаєт] - Oracle VM VirtualBox
Діяльність Термінал 9 22:07 en
bohdan@bohdan-VirtualBox: ~/repos/busybox

-/bin/sh: dmes: not found
/ # dmesg | grep init
[ 0.000000] random: get_random_bytes called from start_kernel+0x9c/0x47c with crng_init=0
[ 0.000000] Memory: 406424K/524288K available (12288K kernel code, 1619K rwd ata, 4784K rodata, 2048K init, 393K bss, 52328K reserved, 65536K cma-reserved, 0K highmem)
[ 0.000000] .init : 0x(ptrval) - 0x(ptrval) (2048 kB)
[ 0.170302] devtmpfs: initialized
[ 0.238258] pinctrl core: initialized pinctrl subsystem
[ 0.711954] SCSI subsystem initialized
[ 1.285417] Trying to unpack rootfs image as initramfs...
[ 4.342613] Freeing initrd memory: 25096K
[ 4.867761] SuperH (H)SCI(F) driver initialized
[ 4.874406] msm_serial: driver initialized
[ 4.883767] STMicroelectronics ASC driver initialized
[ 4.896276] STM32 USART driver initialized
[ 6.463614] Run /init as init process

/ # busybox --help | head -15
BusyBox v1.32.1 (2021-12-09 20:45:47 EET) 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]...
```

ubuntu [Работает] - Oracle VM VirtualBox

Діяльність Термінал 9 22:08 en

bohdan@bohdan-VirtualBox: ~/repos/busybox

```
OK highmem)
[ 0.000000] .init : 0x(ptrval) - 0x(ptrval) (2048 kB)
[ 0.170302] devtmpfs: initialized
[ 0.238258] pinctrl core: initialized pinctrl subsystem
[ 0.711954] SCSI subsystem initialized
[ 1.285417] Trying to unpack rootfs image as initramfs...
[ 4.342613] Freeing initrd memory: 25096K
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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.

/ #
```

ubuntu [Работает] - Oracle VM VirtualBox

Діяльність Термінал 9 22:10 en

bohdan@bohdan-VirtualBox: ~/repos/busybox

```
[ 4.874406] msm_serial: driver initialized
[ 4.883767] STMicroelectronics ASC driver initialized
[ 4.896276] STM32 USART driver initialized
[ 6.463614] Run /init as init process
/ # busybox --help | head -15
BusyBox v1.32.1 (2021-12-09 20:45:47 EET) multi-call binary.
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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
[ 1451.235633] reboot: Power down
bohdan@bohdan-VirtualBox:~/repos/busybox$
```



