Xilinx Zynq FPGA, TI DSP, MCU 기반의 프로그래밍 및 회로 설계 전문가 과정

강사 – Innova Lee (이상훈) gcccompil3r@gmail.com 학생-김민주 alswngodrl@naver.com

```
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ vi dup.c
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ vi a.txt
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ./a.out
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ vi dup.c
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ cat mytar.c>ccc
cat: mytar.c: No such file or directory
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ cat mytar.c > ccc
cat: mytar.c: No such file or directory
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ cat book2.c > ccc
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ cat ccc
#include <stdio.h>
int main(void)
        int array1[2][2]={{1,2},{3,4}}, array2[2][2]={{5,6},{7,8}};
        int result[2][2];
        result[0][0] = array1[0][0]*array2[0][0] + array1[0][1]*array2[1][0];
        result[0][1] = array1[0][0]*array2[0][1] + array1[0][1]*array2[1][1];
        result[1][0] = array1[1][0]*array2[0][0] + array1[1][1]*array2[1][0];
        result[1][1] = array1[1][0]*array2[0][1] + array1[1][1]*array2[1][1];
        printf("%d %d %d %d\n",result[0][0],result[0][1],result[1][0],result[1][
1]);
        return 0;
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ cat ccc
#include <stdio.h>
int main(void)
        int array1[2][2]={{1,2},{3,4}}, array2[2][2]={{5,6},{7,8}};
        int result[2][2];
        result[0][0] = array1[0][0]*array2[0][0] + array1[0][1]*array2[1][0];
        result[0][1] = array1[0][0]*array2[0][1] + array1[0][1]*array2[1][1];
        result[1][0] = array1[1][0]*array2[0][0] + array1[1][1]*array2[1][0];
        result[1][1] = array1[1][0]*array2[0][1] + array1[1][1]*array2[1][1];
        printf("%d %d %d %d\n",result[0][0],result[0][1],result[1][0],result[1][
1]);
        return 0;
```

```
🔊 🖨 📵 alswnqodrl@alswnqodrl-900X3K: ~/Homework/minjukim
#include <unistd.h>
#include <fcntl.h>
#include <stdio.h>
int main(void)
        int fd;
        fd = open("a.txt", 0_WRONLY|0_CREAT|0_TRUNC, 0644);
        close(1);
        dup(fd);
        printf("출력될까?\n");
        return 0;
```

```
"a.txt" 1L, 14C
```



```
ATOI(3)
                                                                                                                                                                                        AT01(3)
                                                                                   Linux Programmer's Manual
       atoi, atol, atoll - convert a string to an integer
SYNOPSIS
       #include <stdlib.h>
       int atoi(const char *nptr);
       long atol(const char *nptr);
       long long atoll(const char *nptr);
   Feature Test Macro Requirements for glibc (see feature_test_macros(7)):
           BSD_SOURCE || SVID_SOURCE || XOPEN_SOURCE >= 600 || ISOC99_SOURCE || POSIX_C_SOURCE >= 200112L;
           or <u>cc</u> <u>-std=c99</u>
DESCRIPTION
       The atoi() function converts the initial portion of the string pointed to by nptr to int. The behavior is the same as
           strtol(nptr, NULL, 10);
       except that atoi() does not detect errors.
       The atol() and atoll() functions behave the same as atoi(), except that they convert the initial portion of the string to their return type of long or long long.
RETURN VALUE
       The converted value.
ATTRIBUTES
       For an explanation of the terms used in this section, see attributes(7).
        Interface
                                  Attribute
        atoi(), atol(), atoll()
                                                  MT-Safe locale
                                  Thread safety
CONFORMING TO
       POSIX.1-2001, POSIX.1-2008, C99, SVr4, 4.3BSD. C89 and POSIX.1-1996 include the functions atoi() and atol() only.
NOTES
       Linux libc provided atoq() as an obsolete name for atoll(); atoq() is not provided by glibc.
SEE ALSO
       atof(3), strtod(3), strtol(3), strtoul(3)
COLOPHON
       This page is part of release 4.04 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at
       http://www.kernel.org/doc/man-pages/.
                                                                                          2015-08-08
                                                                                                                                                                                        ATOI(3)
Manual page atoi(3) line 1/52 (END) (press h for help or q to quit)
```

```
alswngo+ 2008
                   1459 0 09:54 ?
                                                00:00:00 /usr/lib/gvfs/gvfs-gphoto2-volum
alswnqo+
            2045
                   1459 0 09:54 ?
                                                00:00:00 /usr/lib/gvfs/gvfsd-trash --spaw
            2076
root
                    983 0 09:54 ?
                                                00:00:00 /sbin/dhclient -d -q -sf /usr/li
            2084
                   1459
                          0 09:54 ?
                                                00:00:00 /usr/lib/gvfs/gvfsd-metadata
00:00:00 /usr/sbin/dnsmasq --no-resolv -
alswngo+
                          0 09:54 ?
nobody
                    983
alswngo+
           2190
                   1459 0 09:54 3
                                                00:00:00 /usr/lib/x86_64-linux-gnu/notify
                                                00:00:01 avahi-daemon: running [alswngodr
avahi
            2218
                           0 09:54 ?
                                                00:00:00 avahi-daemon: chroot helper
            2220
                   2218 0 09:54
avahi
           2602
2609
                   1749
                          0 09:54 ?
                                                00:00:01 zeitgeist-datahub
00:00:00 /bin/sh -c /usr/lib/x86_64-linux
alswnqo+
alswnqo+
                   1459
                          0 09:54 ?
                   2609
                          0 09:54
                                                00:00:00 /usr/bin/zeitgeist-daemon
00:00:00 /usr/lib/x86_64-linux-gnu/zeitge
alswngo+
            2613
                   1459 0 09:54 ?
alswnqo+
            2620
            2787
                   1749 0 09:55 ?
                                                00:00:00 update-notifier
alswnqo+
                   1749 0 09:56 ?
                                                00:00:00 /usr/lib/x86_64-linux-gnu/deja-d
00:00:00 /usr/sbin/cupsd -l
alswngo+
            2822
                           0 09:58 ?
            2994
root
                      1 0 09:58
                                                00:00:00 /usr/sbin/cups-browsed
            2995
root
            2996
                   2994 0 09:58 ?
                                                00:00:00 /usr/lib/cups/notifier/dbus dbus
            2997
                   2994 0 09:58 7
                                                00:00:00 /usr/lib/cups/notifier/dbus dbus
                                                00:00:00 /usr/lib/cups/notifier/dbus dbus 00:06:38 /usr/lib/firefox/firefox
lp
alswngo+
            2998
                   2994
                           0 09:58 ?
           3488
                   1459
                          3 10:04 7
alswngo+
           3546
                   3488
                          0 10:04 ?
                                                00:00:13 /usr/lib/firefox/firefox -conten
                   3488 3 10:04 ?
1459 0 10:04 ?
3787 0 10:04 pts/2
alswngo+
           3739
                                                00:06:30 /usr/lib/firefox/firefox -conten
alswnqo+
           3787
                                                00:00:39 /usr/lib/gnome-terminal/gnome-te
alswngo+
            3793
                                                00:00:00 bash
            3920
                   1459 0 10:13
                                                00:00:00 /usr/lib/gvfs/gvfsd-network --sp
alswngo+
alswnqo+
            3935
                   1459 0 10:13
                                                00:00:00 /usr/lib/gvfs/gvfsd-smb-browse
alswngo+
            3947
                   1459 0 10:13 ?
                                                00:00:00 /usr/lib/gvfs/gvfsd-dnssd --spaw
                      2 0 12:13 ?
2 0 12:30 ?
2 0 12:38 ?
2 0 12:38 ?
                                               00:00:01 [kworker/u8:3]
00:00:00 [kworker/u9:3]
00:00:00 [scsi_eh_4]
root
            5451
            5815
root
            6102
root
            6103
                                                00:00:00 [scsi tmf 4]
root
                      2 0 12:38 ?
2 0 13:02 ?
2 0 13:02 ?
root
            6104
                                                00:00:00 [usb-storage]
            6467
                                                00:00:00 [kworker/1:1]
00:00:00 [kworker/2:0]
root
            6486
root
                      2 0 13:03 ?
2 0 13:08 ?
            6490
                                                00:00:00 [kworker/u8:2]
root
            6519
                                                00:00:00 [kworker/2:1]
root
                      2 0 13:08 ?
2 0 13:09 ?
2 0 13:13 ?
            6523
                                                00:00:00 [kworker/u9:0]
root
            6529
                                                00:00:00 [kworker/u8:0]
00:00:00 [kworker/u9:1]
root
root
            6613
                                                00:00:00 [kworker/3:2]
            6614
                          0 13:13 ?
root
            6663
                   1459 0 13:15 ?
                                                00:00:00 /usr/lib/x86 64-linux-qnu/unity-
alswngo+
                                               00:00:00 /usr/bin/unity-scope-loader appl
00:00:00 /usr/lib/x86_64-linux-gnu/unity-
            6674
                   1459 0 13:15 ?
alswnqo+
                   1459 0 13:15 ?
2 0 13:18 ?
alswngo+
            6676
                      2 0 13:18 ?
2 0 13:20 ?
2 0 13:21 ?
                                                00:00:00 [kworker/0:1]
root
            6768
                                                00:00:00 [kworker/1:0]
            6825
root
root
            6838
                                                00:00:00 [kworker/2:2]
                      2 0 13:23 ?
2 0 13:24 ?
2 0 13:24 ?
                                                00:00:00 [kworker/3:1]
root
            6899
                                                00:00:00 [kworker/0:2]
00:00:00 [kworker/u9:4]
root
            6900
root
            6928
                       2 0 13:29 ?
                                                00:00:00 [kworker/3:0]
root
            6971
                       2 0 13:29 ?
root
            6974
                                                00:00:00 [kworker/0:0]
                       2 0 13:29 ?
2 0 13:29 ?
                                                00:00:00 [kworker/u8:1]
root
            6983
            6989
                                                00:00:00 [kworker/2:3]
00:00:00 [kworker/1:2]
root
root 7004 2 0 13:31 ?
alswnqo+ 7006 3793 0 13:31 pts/2
                                               00:00:00 ps -ef
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$
```

```
alswnqo+ 2602 1749 0 09:54 ?
                                         00:00:01 zeitgeist-datahub
                1459 0 09:54 ?
                                         00:00:00 /bin/sh -c /usr/lib/x86 64-linux
alswnqo+
          2609
                                         00:00:00 /usr/bin/zeitgeist-daemon
00:00:00 /usr/lib/x86_64-linux-gnu/zeitge
alswnqo+
          2613
                2609 0 09:54 ?
alswngo+
          2620
                1459
                      0 09:54 ?
          2787
alswngo+
                1749 0 09:55 ?
                                         00:00:00 update-notifier
alswngo+
          2822
                1749 0 09:56 ?
                                         00:00:00 /usr/lib/x86_64-linux-gnu/deja-d
                                         00:00:00 /usr/sbin/cupsd -l
          2994
                       0 09:58 ?
root
          2995
                       0 09:58 ?
                                         00:00:00 /usr/sbin/cups-browsed
root
          2996
                2994 0 09:58 ?
                                         00:00:00 /usr/lib/cups/notifier/dbus dbus
          2997
                2994 0 09:58 ?
                                         00:00:00 /usr/lib/cups/notifier/dbus dbus
          2998
                2994 0 09:58 ?
                                         00:00:00 /usr/lib/cups/notifier/dbus dbus
          3488
                1459
                      3 10:04 ?
                                         00:06:38 /usr/lib/firefox/firefox
alswnqo+
                      0 10:04 ?
alswnqo+
          3546
                3488
                                         00:00:13 /usr/lib/firefox/firefox -conten
                3488
alswnqo+
          3739
                      3 10:04 ?
                                         00:06:30 /usr/lib/firefox/firefox -conten
alswnqo+
          3787
                1459 0 10:04 ?
                                         00:00:39 /usr/lib/gnome-terminal/gnome-te
         3793
                3787 0 10:04 pts/2
                                         00:00:00 bash
alswnqo+
                1459 0 10:13 ?
                                         00:00:00 /usr/lib/gvfs/gvfsd-network --sp
alswnqo+
          3920
alswngo+
          3935
                1459 0 10:13 ?
                                         00:00:00 /usr/lib/qvfs/qvfsd-smb-browse
                1459 0 10:13 ?
alswngo+
          3947
                                         00:00:00 /usr/lib/qvfs/qvfsd-dnssd --spaw
          5451
                   2 0 12:13 ?
                                         00:00:01 [kworker/u8:3]
root
                   2 0 12:30 ?
2 0 12:38 ?
          5815
                                         00:00:00 [kworker/u9:3]
root
                                         00:00:00 [scsi_eh_4]
00:00:00 [scsi_tmf_4]
00:00:00 [usb-storage]
root
          6102
root
          6103
                       0 12:38 ?
root
          6104
                       0 12:38 ?
                                         00:00:00 [kworker/1:1]
                      0 13:02 ?
root
          6467
                    2 0 13:02 ?
                                         00:00:00 [kworker/2:0]
          6486
root
          6490
                    2 0 13:03 ?
                                         00:00:00 [kworker/u8:2]
root
          6519
                    2 0 13:08 ?
                                         00:00:00 [kworker/2:1]
root
                   2 0 13:08 ?
root
          6523
                                         00:00:00 [kworker/u9:0]
          6529
                   2 0 13:09 ?
                                         00:00:00 [kworker/u8:0]
root
          6613
                      0 13:13 ?
                                         00:00:00 [kworker/u9:1]
root
                                         00:00:00 [kworker/3:2]
          6614
root
                      0 13:13 ?
          6663
                1459 0 13:15 ?
                                         00:00:00 /usr/lib/x86 64-linux-gnu/unity
alswnqo+
          6674
                1459 0 13:15 ?
                                         00:00:00 /usr/bin/unity-scope-loader appl
                1459 0 13:15 ?
                                         00:00:00 /usr/lib/x86 64-linux-gnu/unity
alswnqo+
          6676
root
          6768
                   2 0 13:18 ?
                                         00:00:00 [kworker/0:1]
                   2 0 13:20 ?
2 0 13:21 ?
2 0 13:23 ?
2 0 13:24 ?
          6825
                                         00:00:00 [kworker/1:0]
root
          6838
                                         00:00:00 [kworker/2:2]
root
          6899
                                         00:00:00 [kworker/3:1]
root
root
          6900
                                         00:00:00 [kworker/0:2]
          6928
                       0 13:24 ?
                                         00:00:00 [kworker/u9:4]
root
                                         00:00:00 [kworker/3:0]
          6971
root
                       0 13:29 ?
                                         00:00:00 [kworker/0:0]
          6974
                       0 13:29 ?
root
          6983
                       0 13:29 ?
                                         00:00:00 [kworker/u8:1]
root
root
          6989
                   2 0 13:29 ?
                                         00:00:00 [kworker/2:3]
                                         00:00:00 [kworker/1:2]
root
                   2 0 13:31 ?
alswnqo+ 7006 3793 0 13:31 pts/2
                                         00:00:00 ps -ef
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash
alswnqo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
alswnqo+ 7044 3793 0 13:32 pts/2
                                         00:00:00 grep --color=auto bash
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep,
alswngo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep|
awk '{print $2}'
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$
```

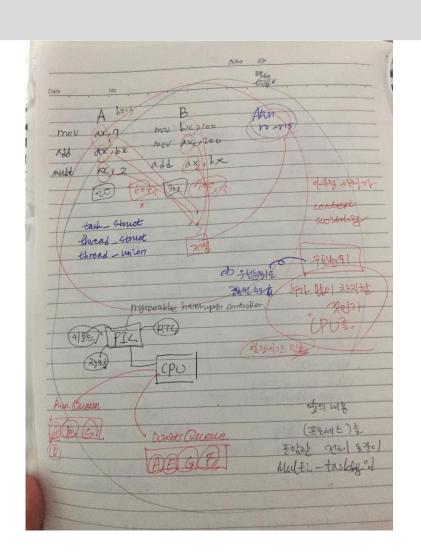
```
2609
                                                                                1459 0 09:54 ?
                                                                                                           00:00:00 /bin/sh -c /usr/lib/x86_64-linux
00:00:00 /usr/bin/zeitgeist-daemon
                                                             alswngo+
                                                                         2613
                                                                                      0 09:54 ?
                                                             alswngo+
                                                                                2609
                                                                                                           00:00:00 /usr/lib/x86 64-linux-gnu/zeitge
                                                     × NAVEalswngo+
                                                                         2620
                                                                                1459 0 09:54 ?
                                                                         2787
                                                                                                           00:00:00 update-notifler
00:00:00 /usr/lib/x86_64-linux-gnu/deja-d
                                                                                1749 0 09:55 ?
                                                             alswnqo+
alswnqo+
              김민주 1개월차 시험
                         김민주 1개월차 시험
                                     집민국 ← → 연 습
                                                                         2822
                                                                                1749 0 09:56 ?
                자료구조.pdf
                          자료구조 오답.pdf
                                      아픈
                                        Firefox prevented this site fro
                                                                         2994
                                                                                       0 09:58 ?
                                                                                                           00:00:00 /usr/sbin/cupsd -l
                                                             root
                            0 09:58 ?
0 09:58 ?
                                                                                                           00:00:00 /usr/sbin/cups-browsed
                                                              root
                                                                         2995
                                                              lp
                                                                          2996
                                                                                2994
                                                                                                           00:00:00 /usr/lib/cups/notifier/dbus dbus
   김민주 1개월차 시형
                                                                         2997
                                                                                2994 0 09:58 ?
                                                                                                           00:00:00 /usr/lib/cups/notifier/dbus dbus
                                                              lp
   매플리케이션분석오
     답.pdf
                                                                                2994 0 09:58 ?
                                                                                                           00:00:00 /usr/lib/cups/notifier/dbus dbus
                                                                         2998
                                                                         3488
      C
                                                             alswnqo+
                                                                                1459
                                                                                        3 10:04 ?
                                                                                                           00:06:38 /usr/lib/firefox/firefox
                                                                         3546
                                                                                                           00:00:13 /usr/lib/firefox/firefox -conten
                                                             alswngo+
                                                                                3488
                                                                                       0 10:04 ?
                                                              alswnqo+ 3739
                                                                                3488
                                                                                       3 10:04 ?
0 10:04 ?
                                                                                                           00:06:30 /usr/lib/firefox/firefox -conten
                                                                                1459
                                                              alswnqo+
                                                                         3787
                                                                                                           00:00:39 /usr/lib/gnome-terminal/gnome-te
      cat
                             C
                                                                         3793
                                                                                3787 0 10:04 pts/2
                                                                                                           00:00:00 bash
                                                             alswngo+
                                                                                                           00:00:00 /usr/lib/gvfs/gvfsd-network --sp
00:00:00 /usr/lib/gvfs/gvfsd-smb-browse -
00:00:00 /usr/lib/gvfs/gvfsd-dnssd --spaw
                                                              alswnqo+
                                                                         3920
                                                                                1459 0 10:13 ?
   implementation
syscall_print
                                                                                       0 10:13 ?
                                                              alswngo+
                                                                         3935
                                                                                1459
                                                              alswngo+
                                                                         3947
                                                                                1459 0 10:13 ?
      C
                                                                                   2 0 12:13 ?
2 0 12:30 ?
2 0 12:38 ?
2 0 12:38 ?
                                                                                                           00:00:01 [kworker/u8:3]
                                                                         5451
                                                                                                           00:00:00 [kworker/u9:3]
00:00:00 [scsi_eh_4]
                                                              root
                                                                         5815
                             C
                                                              root
                                                                         6102
                                                                                                           00:00:00 [scsi_tmf_4]
                                                                                                           00:00:00 [usb-storage]
00:00:00 [kworker/1:1]
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
alswnqo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
alswnqo+ 7122 3787 0 13:41 pts/17 00:00:00 bash
                                                                                                           00:00:00 [kworker/2:0]
                                                                                                           00:00:00 [kworker/u8:2]
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$
                                                                                                           00:00:00 [kworker/2:1]
                                                                                                           00:00:00 [kworker/u9:0]
                                                                                                           00:00:00 [kworker/u8:0]
                                                                                                           00:00:00 [kworker/u9:1]
                                                                                                           00:00:00 [kworker/3:2]
                                                                                                           00:00:00 /usr/lib/x86_64-linux-gnu/unity-
                                                                                                           00:00:00 /usr/bin/unity-scope-loader appl 00:00:00 /usr/lib/x86 64-linux-gnu/unity-
                                                                                                           00:00:00 [kworker/0:1]
                                                                                                           00:00:00 [kworker/1:0]
                                                                                                           00:00:00 [kworker/2:2]
                                                                                                           00:00:00 [kworker/3:1]
                                                                                                           00:00:00 [kworker/0:2]
                                                                                                           00:00:00 [kworker/u9:4]
                                                                                                           00:00:00 [kworker/3:0]
                                                                                                           00:00:00 [kworker/0:0]
                                                                                                           00:00:00 [kworker/u8:1]
                                                                                                           00:00:00 [kworker/2:3]
                                                                                                           00:00:00 [kworker/1:2]
                                                                                                           00:00:00 ps -ef
                                                                                              1 pts/2
                                                                                                 /Homework/minjukim$ ps -ef|grep bash
                                                              alswngo+ 3793 3787 0 10:04 pts/2
                                                                                                           00:00:00
                                                              alswnqo+ 7044 3793 0 13:32 pts/2
                                                                                                           00:00:00 grep --color=auto bash
                                                              alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
                             C
      C
                                                              alswnqo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
                                                              alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep|awk '{print $2}
                                                              3793
                                                             alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep alswnqo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
                                                             alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$
```

```
alswnqo+
                                                                             1459 0 09:54 ?
                                                                                                       00:00:00 /bin/sh -c /usr/lib/x86_64-linux
                                                                      2613
                                                                             2609 0 09:54 ?
                                                                                                       00:00:00 /usr/bin/zeitgeist-daemon
00:00:00 /usr/lib/x86 64-linux-gnu/zeitge
                                                           alswngo+
                                                                             1459 0 09:54 ?
                                                          alswnqo+
                                                                      2620
                                                                             1749 0 09:55
                                                           alswnqo+
                                                                      2787
                                                                                                       00:00:00 update-notifier
              김인주 1개필차 시험
                        김민주 1개월차 시험
                                   집만에 (~) > 연 습
                                                           alswngo+
                                                                      2822 1749 0 09:56 ?
                                                                                                       00:00:00 /usr/lib/x86_64-linux-gnu/deja-d
               자료구조.pdf
                         자료구조 오단 odf
                                    00番
                                       Firefox prevented this site fr
                                                                       2994
                                                                                   0 09:58 ?
                                                                                                       00:00:00 /usr/sbin/cupsd -l
                                                            root
                                                                                                       00:00:00 /usr/sbin/cups-browsed
                                                                      2995
                                                                                   0 09:58 ?
                0
                                                           root
       1965
                                                                             2994 0 09:58 ?
                                                                      2996
                                                                                                       00:00:00 /usr/lib/cups/notifier/dbus dbus
   김민주 1개월자 시험
                                                           lp
                                                                      2997
                                                                             2994
                                                                                   0 09:58
                                                                                                       00:00:00 /usr/lib/cups/notifier/dbus dbus
   애플리케이셔보석 오
                                                                                                       00:00:00 /usr/lib/cups/notifier/dbus dbus
                                                                                   0 09:58 ?
     El.pdf
                                                                      2998
                                                                             2994
                                                           alswngo+
                                                                      3488
                                                                             1459
                                                                                   3 10:04 ?
                                                                                                       00:06:38 /usr/lib/firefox/firefox
                                                                                                       00:00:13 /usr/lib/firefox/firefox -conten 00:06:30 /usr/lib/firefox/firefox -conten
                                                           alswnqo+
                                                                      3546
                                                                             3488
                                                                                   0 10:04 ?
                                                                                   3 10:04 ?
                                                           alswnqo+
                                                                      3739
                                                                             3488
                                                                      3787
                                                                             1459
                                                                                   0 10:04 ?
                                                                                                       00:00:39 /usr/lib/gnome-terminal/gnome-te
                                                           alswngo+
      C
                                                           alswnqo+
                                                                      3793
                                                                             3787
                                                                                   0 10:04 pts/2
                                                                                                       00:00:00 bash
                                                           alswngo+
                                                                      3920
                                                                             1459
                                                                                   0 10:13 ?
                                                                                                       00:00:00 /usr/lib/gvfs/gvfsd-network --sp
                                                           alswngo+
                                                                      3935
                                                                             1459 0 10:13 ?
                                                                                                       00:00:00 /usr/lib/gvfs/gvfsd-smb-browse -
                                                                             1459
                                                                                                       00:00:00 /usr/lib/gvfs/gvfsd-dnssd --spaw
                                                           alswnqo+
                                                                      3947
                                                                                  0 10:13 ?
                                                                       5451
                                                                                   0 12:13 ?
                                                                                                       00:00:01 [kworker/u8:3]
                                                           root
     data1.c
                data1.txt
                           data2.txt
                                                                                                       00:00:00 [kworker/u9:3]
                                                            root
                                                                      5815
                                                                                   0 12:30 ?
                                                            root
                                                                      6102
                                                                                   0 12:38 ?
                                                                                                       00:00:00 [scsi eh 4]
                                                                                   A 12-38 ?
                                                                                                       00:00:00 [scsi_tmf_4]
                                                                                                       00:00:00 [usb-storage
tail: cannot open '/var/log/messages' for reading: No such file or directory
                                                                                                       00:00:00 [kworker/1:1]
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ tail -n -1 book2.c
                                                                                                       00:00:00 [kworker/2:0]
                                                                                                       00:00:00 [kworker/u8:2]
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ tail -n -15 book2.c
                                                                                                       00:00:00 [kworker/2:1]
                                                                                                       00:00:00 [kworker/u9:0]
int main(void)
                                                                                                       00:00:00 [kworker/u8:0]
00:00:00 [kworker/u9:1]
         int array1[2][2]={{1,2},{3,4}}, array2[2][2]={{5,6},{7,8}};
                                                                                                       00:00:00 [kworker/3:2]
                                                                                                       00:00:00 /usr/lib/x86_64-linux-gnu/unity-
                                                                                                       00:00:00 /usr/bin/unity-scope-loader appl
         result[0][0] = array1[0][0]*array2[0][0] + array1[0][1]*array2[1][0];
                                                                                                       00:00:00 /usr/lib/x86 64-linux-anu/unity-
        result[0][1] = array1[0][0]*array2[0][1] + array1[0][1]*array2[1][1];
result[1][0] = array1[1][0]*array2[0][0] + array1[1][1]*array2[1][0];
                                                                                                       00:00:00 [kworker/0:1]
                                                                                                       00:00:00 [kworker/1:0]
         result[1][1] = array1[1][0]*array2[0][1] + array1[1][1]*array2[1][1];
                                                                                                       00:00:00 [kworker/2:2]
                                                                                                       00:00:00 [kworker/3:1]
         printf("%d %d %d %d\n", result[0][0], result[0][1], result[1][0], result[1][ 1 / 2
                                                                                                       00:00:00 [kworker/0:2]
1]);
                                                                                                       00:00:00 [kworker/u9:4]
                                                                                                       00:00:00 [kworker/3:0]
         return 0;
                                                                                                       00:00:00 [kworker/0:0]
                                                                                                       00:00:00 [kworker/u8:1]
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ vi lin.c
                                                                                                       00:00:00 [kworker/2:3]
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ gcc lin.c
                                                                                                       00:00:00 [kworker/1:2]
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ./a.out
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$
                                                                                            l pts/2
                                                                                                       00:00:00 ps -ef
                                                                                                      k/minjukim$ ps -ef|grep bash
                                                           alswnqo+ 3793 3787 0 10:04 pts/2
                                                                                                       00:00:00
                                                           alswnqo+ 7044 3793 0 13:32 pts/2 00:00:00 grep --color=auto <mark>bash</mark>
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
                 tri1.c
                            trize
                                                           alswnqo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
                                                           alswnqodrl@alswnqodrl-900X3K:-/Homework/minjukim$ ps -ef|grep bash|grep -v grep|awk '{print $2}'
                                                           alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
                                                           alswnqo+ 3793 3787 0 10:04 pts/2 00:00:00 bash
                                                           alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$
```

```
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ tail -n -15 book2.c
                                                            00:00:00 /bin/sh -c /usr/lib/x86 64-linux
                                                            00:00:00 /usr/bin/zeitgeist-daemon
int main(void)
                                                     4 ?
                                                            00:00:00 /usr/lib/x86 64-linux-qnu/zeitge
                                                            00:00:00 update-notifier
                                                     5 ?
     int array1[2][2]={{1,2},{3,4}}, array2[2][2]={{5,6},{7,8}};
int result[2][2];
                                                     6 ?
                                                            00:00:00 /usr/lib/x86 64-linux-gnu/deja-d
                                                     8 ?
                                                            00:00:00 /usr/sbin/cupsd -l
                                                            00:00:00 /usr/sbin/cups-browsed
     result[0][0] = array1[0][0]*array2[0][0] + array1[0][1]*array2[1][0];
                                                            00:00:00 /usr/lib/cups/notifier/dbus dbus
                                                     8 ?
     result[0][1] = array1[0][0]*array2[0][1] + array1[0][1]*array2[1][1];
result[1][0] = array1[1][0]*array2[0][0] + array1[1][1]*array2[1][0];
                                                     8 ?
                                                            00:00:00 /usr/lib/cups/notifier/dbus dbus
                                                     8 ?
                                                            00:00:00 /usr/lib/cups/notifier/dbus dbus
     result[1][1] = array1[1][0]*array2[0][1] + array1[1][1]*array2[1][1];
                                                     4 ?
                                                            00:06:38 /usr/lib/firefox/firefox
                                                            00:00:13 /usr/lib/firefox/firefox -conten
     printf("%d %d %d %d\n",result[0][0],result[0][1],result[1][0],result[1][4 ?
                                                            00:06:30 /usr/lib/firefox/firefox -conten
1]);
                                                            00:00:39 /usr/lib/gnome-terminal/gnome-te
                                                            00:00:00 bash
                                                     4 pts/2
                                                            00:00:00 /usr/lib/gvfs/gvfsd-network --sp
     return 0:
                                                            00:00:00 /usr/lib/gvfs/gvfsd-smb-browse -
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ vi lin.c
                                                            00:00:00 /usr/lib/qvfs/qvfsd-dnssd --spaw
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ gcc lin.c
                                                            00:00:01 [kworker/u8:3]
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$ ./a.out
                                                            00:00:00 [kworker/u9:3]
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ ./a.out mbr.txt
                                                            00:00:00 [scsi eh 4]
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$ xxd mbr.txt
                                                            00:00:00 [scsi tmf 4]
00:00:00 [usb-storage]
00:00:00 [kworker/1:1]
00:00:00 [kworker/2:0]
00:00:00 [kworker/u8:2]
00:00:00 [kworker/2:1]
00:00:00 [kworker/u9:0]
00:00:00 [kworker/u8:0]
00:00:00 [kworker/u9:1]
00:00:00 [kworker/3:2]
00:00:00 /usr/lib/x86_64-linux-gnu/unity-
00:00:00 /usr/bin/unity-scope-loader appl
00:00:00 /usr/lib/x86_64-linux-gnu/unity-
00:00:00 [kworker/0:1]
00:00:00 [kworker/1:0]
00:00:00 [kworker/2:2]
00:00:00 [kworker/3:1]
00:00:00 [kworker/0:2]
00:00:00 [kworker/u9:4]
00:00:00 [kworker/3:0]
                                                            00:00:00 [kworker/0:0]
00:00:00 [kworker/u8:1]
00:00:00 [kworker/2:3]
1 ?
                                                            00:00:00 [kworker/1:2]
1 pts/2
                                                            00:00:00 ps -ef
:~/Homework/minjukim$ ps -ef|grep bash
4 pts/2
                                                            00:00:00
00:00:00 grep --color=auto bash
                                                     2 pts/2
:~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
4 pts/2 00:00:00 bash
:~/Homework/minjukim$ ps -ef|qrep bash|qrep -v qrep|awk '{print $2}'
~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
00000200: 0000 0000 0000 0000 61
                                                     4 pts/2 00:00:00 bash
alswngodrl@alswngodrl-900X3K:~/Homework/minjukim$
                                                      ~/Homework/minjukim$
```

```
1 root dialout
                                  76 Mar 21 09:53 ttyS12
                                                                                             00:00:00 /bin/sh -c /usr/lib/x86 64-linux
                                  77 Mar 21 09:53 ttyS13
                                                                                             00:00:00 /usr/bin/zeitgeist-daemon
             1 root dialout
                                                                                  4 ?
crw-rw----
             1 root dialout
                                  78 Mar 21 09:53 ttvS14
                                                                                  4 ?
                                                                                             00:00:00 /usr/lib/x86 64-linux-gnu/zeitge
crw-rw----
             1 root dialout
                                  79 Mar 21 09:53 ttyS15
                                                                                             00:00:00 update-notifier
                                  80 Mar 21 09:53 ttyS16
                                                                                  6 ?
                                                                                             00:00:00 /usr/lib/x86 64-linux-gnu/deja-d
crw-rw----
             1 root dialout
crw-rw----
             1 root dialout
                                  81 Mar 21 09:53 ttyS17
                                                                                  8 ?
                                                                                             00:00:00 /usr/sbin/cupsd -l
crw-rw----
             1 root dialout
                                  82 Mar 21 09:53 ttyS18
                                                                                             00:00:00 /usr/sbin/cups-browsed
                                  83 Mar 21 09:53 ttyS19
crw-rw----
             1 root dialout
                                                                                             00:00:00 /usr/lib/cups/notifier/dbus dbus
                                  66 Mar 21 09:53 ttyS2
crw-rw----
                                                                                             00:00:00 /usr/lib/cups/notifier/dbus dbus
             1 root dialout
                                  84 Mar 21 09:53 ttyS20
                                                                                             00:00:00 /usr/lib/cups/notifier/dbus dbus
crw-rw----
             1 root dialout
                                  85 Mar 21 09:53 ttyS21
crw-rw----
             1 root dialout
                                                                                             00:06:38 /usr/lib/firefox/firefox
crw-rw----
             1 root dialout
                                  86 Mar 21 09:53 ttyS22
                                                                                             00:00:13 /usr/lib/firefox/firefox -conten
                                  87 Mar 21 09:53 ttyS23
88 Mar 21 09:53 ttyS24
                                                                                             00:06:30 /usr/lib/firefox/firefox -conten
crw-rw----
             1 root dialout
                                                                                             00:00:39 /usr/lib/gnome-terminal/gnome-te
crw-rw----
             1 root dialout
                                                                                  4 ?
crw-rw----
             1 root dialout
                                  89 Mar 21 09:53 ttyS25
                                                                                             00:00:00 bash
                                                                                  4 pts/2
crw-rw----
             1 root dialout
                                  90 Mar 21 09:53 ttyS26
                                                                                             00:00:00 /usr/lib/gvfs/gvfsd-network --sp
crw-rw----
             1 root dialout
                                  91 Mar 21 09:53 ttyS27
                                                                                             00:00:00 /usr/lib/gvfs/gvfsd-smb-browse -
                                  92 Mar 21 09:53 ttyS28
crw-rw----
             1 root dialout
                                                                                  3 ?
                                                                                             00:00:00 /usr/lib/gvfs/gvfsd-dnssd --spaw
crw-rw----
             1 root dialout
                                  93 Mar 21 09:53 ttyS29
                                                                                  3 ?
                                                                                             00:00:01 [kworker/u8:3]
                                  67 Mar 21 09:53 ttyS3
                                                                                             00:00:00 [kworker/u9:3]
crw-rw----
             1 root dialout
                                                                                             00:00:00 [scsi_eh 4]
             1 root dialout
                                  94 Mar 21 09:53 ttyS30
crw-rw----
crw-rw----
             1 root dialout
                                  95 Mar 21 09:53 ttyS31
                                                                                             00:00:00 [scsi tmf 4]
                                                                                             00:00:00 [usb-storage]
             1 root dialout
                                  68 Mar 21 09:53 ttvS4
             1 root dialout
                                  69 Mar 21 09:53 ttyS5
                                                                                             00:00:00 [kworker/1:1]
crw-rw----
crw-rw----
             1 root dialout
                                  70 Mar 21 09:53 ttyS6
                                                                                             00:00:00 [kworker/2:0]
                                  71 Mar 21 09:53 ttyS7 72 Mar 21 09:53 ttyS8
                                                                                             00:00:00 [kworker/u8:2]
             1 root dialout
                                                                                             00:00:00 [kworker/2:1]
crw-rw----
             1 root dialout
crw-rw----
                                  73 Mar 21 09:53 ttyS9
                                                                                             00:00:00 [kworker/u9:0]
             1 root dialout
            2 root root
                                  80 Mar 21 09:53 ubuntu-vg
                                                                                             00:00:00 [kworker/u8:0]
drwxr-xr-x
crw-----
             1 root root
                             10, 239 Mar 21 09:53 uhid
                                                                                             00:00:00 [kworker/u9:1]
crw-----
                             10, 223 Mar 21 09:53 uinput
                                                                                             00:00:00 [kworker/3:2]
             1 root root
                                                                                             00:00:00 /usr/lib/x86 64-linux-gnu/unity-
crw-rw-rw-
             1 root root
                                  9 Mar 21 09:53 urandom
                             10, 240 Mar 21 09:53 userio
                                                                                             00:00:00 /usr/bin/unity-scope-loader appl
00:00:00 /usr/lib/x86_64-linux-gnu/unity-
crw-----
             1 root root
drwxr-xr-x 4 root root
                                  80 Mar 21 09:53 v4l
crw-rw----
            1 root tty
                                   0 Mar 21 09:53 vcs
                                                                                             00:00:00 [kworker/0:1]
crw-rw----
             1 root tty
                                   1 Mar 21 09:53 vcs1
                                                                                             00:00:00 [kworker/1:0]
crw-rw----
             1 root tty
                                   2 Mar 21 09:53 vcs2
                                                                                             00:00:00 [kworker/2:2]
crw-rw----
             1 root tty
                                   3 Mar 21 09:53 vcs3
                                                                                             00:00:00 [kworker/3:1]
                                   4 Mar 21 09:53 vcs4
                                                                                             00:00:00 [kworker/0:2]
rw-rw----
             1 root tty
                                   5 Mar 21 09:53 vcs5
                                                                                             00:00:00 [kworker/u9:4]
crw-rw----
             1 root tty
crw-rw----
                                   6 Mar 21 09:53 vcs6
                                                                                             00:00:00 [kworker/3:0]
             1 root tty
crw-rw----
                                 128 Mar 21 09:53 vcsa
                                                                                             00:00:00 [kworker/0:0]
             1 root tty
crw-rw----
             1 root tty
                                 129 Mar 21 09:53 vcsa1
                                                                                  9 ?
                                                                                             00:00:00 [kworker/u8:1]
             1 root tty
                                 130 Mar 21 09:53 vcsa2
crw-rw----
                                                                                  9 ?
                                                                                             00:00:00 [kworker/2:3]
crw-rw----
             1 root tty
                                 131 Mar 21 09:53 vcsa3
                                                                                             00:00:00 [kworker/1:2]
crw-rw----
                                 132 Mar 21 09:53 vcsa4
                                                                                             00:00:00 ps -ef
             1 root tty
                                                                                  1 pts/2
crw-rw----
             1 root tty
                                 133 Mar 21 09:53 vcsa5
                                                                                  :~/Homework/minjukim$ ps -ef|grep bash
                                 134 Mar 21 09:53 vcsa6
                                                                                             00:00:00
crw-rw----
             1 root tty
                                                                                   4 pts/2
                                                                                             00:00:00 grep --color=auto bas
                                  60 Mar 21 09:53 vfio
drwxr-xr-x
            2 root root
                                                                                   2 pts/2
                                 63 Mar 21 09:53 vga_arbiter
                                                                                   :~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
crw-----
             1 root root
crw-----
             1 root root
                             10, 137 Mar 21 09:53 vhci
                                                                                   pts/2 00:00:00 bash
                                 238 Mar 21 09:53 vhost-net
                                                                                    ~/Homework/minjukim$ ps -ef|grep bash|grep -v grep|awk '{print $2}
crw-----
             1 root root
                             10, 241 Mar 21 09:53 vhost-vsock
crw-----
            1 root root
crw-rw----+ 1 root video
                             81,
                                  0 Mar 21 09:53 video0
                                                                                   :~/Homework/minjukim$ ps -ef|grep bash|grep -v grep
crw-rw-rw- 1 root root
                              1, 5 Mar 21 09:53 zero
                                                                                   4 pts/2 00:00:00 bash
alswnqodrl@alswnqodrl-900X3K:~/Homework/minjukim$
                                                                                   :~/Homework/minjukim$
```

수업 내용 정리



수업 내용 정리

