

C Programming

Day21.B

2017.11.28

File Processing

Copyright (c) 2015 - 2017 Young W. Lim.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.2 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled "GNU Free Documentation License".

```
#include <stdio.h>

int main(void) {
    int i;

    FILE *fp;

    fp = fopen("test.out", "w");

    for (i=0; i<10; ++i)
        printf("i= %d\n", i);

    for (i=0; i<10; ++i)
        fprintf(fp, "i= %d\n", i);

    fclose(fp);
}
```

```
guest-bv4cq9@Usys02 ~ $ gcc -Wall t.c
guest-bv4cq9@Usys02 ~ $ ./a.out
i= 0
i= 1
i= 2
i= 3
i= 4
i= 5
i= 6
i= 7
i= 8
i= 9
guest-bv4cq9@Usys02 ~ $ ls -l test.out
-rw-rw-r-- 1 guest-bv4cq9 guest-bv4cq9 50 nov 29 01:13 test.out
```

50 bytes

```
guest-bv4cq9@Usys02 ~ $ cat test.out
i= 0
i= 1
i= 2
i= 3
i= 4
i= 5
i= 6
i= 7
i= 8
i= 9
```

5 bytes x 10 lines = 50 bytes

```
#include <stdio.h>

int main(void) {
    int i;
    int A[10];

    FILE *fp;

    fp = fopen("test.out", "r");

    for (i=0; i<10; ++i) ← necessary
        fscanf(fp, "i= %d\n", &A[i]);
        // fscanf(fp, "i= %d", &A[i]); // Not Working

    for (i=0; i<10; ++i)
        printf("A[%d]= %d\n", i, A[i]);

    fclose(fp);
}
```

```
#include <stdio.h>

int main(void) {
    int i = 0x41424344; // 4-byte, MSB=01, LSB=04
                    A B C D
    FILE *fp;

    printf("i=%d \n", i);
    printf("i=%x \n", i);

    fp = fopen("test.dat", "w");

    fwrite( &i, sizeof(int), 1, fp);

    fclose(fp);
}
```

```

guest-bv4cq9@Ussys02 ~ $ ./a.out
i=1094861636
i=41424344
guest-bv4cq9@Ussys02 ~ $ ls -l test.dat
-rw-rw-r-- 1 guest-bv4cq9 guest-bv4cq9 4 nov 29 01:19 test.dat
guest-bv4cq9@Ussys02 ~ $
guest-bv4cq9@Ussys02 ~ $ cat test.dat
DCBA
guest-bv4cq9@Ussys02 ~ $
guest-bv4cq9@Ussys02 ~ $ █

```

4 bytes only

DCBA

LSByte first



A B C D

$i = 0x41 \quad 42 \quad 43 \quad 44$

MSB

LSB