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1. 소스코드

<ssu\_dup2\_2.c>

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <fcntl.h>

#include <sys/time.h>

#define SEC\_TO\_MICRO 1000000

#define BUFFER\_SIZE 1024

int main(void){

struct timeval begin\_t, end\_t;

char buf[BUFFER\_SIZE];

char \*fname = "ssu\_test.txt";

int fd;

int length;

gettimeofday(&begin\_t, NULL);

if((fd = open(fname, O\_RDONLY, 0644)) < 0){

fprintf(stderr, "open error for %s\n", fname);

exit(1);

}

if(dup2(1, 4) != 4){ // stdout을 4에 dup

fprintf(stderr, "dup2 call failed\n");

exit(1);

}

while(1){

length = read(fd, buf, BUFFER\_SIZE);

if(length <= 0)

break;

write(4, buf, length); // fd에 buf를 write

}

gettimeofday(&end\_t, NULL);

end\_t.tv\_sec -= begin\_t.tv\_sec;

if(end\_t.tv\_usec < begin\_t.tv\_usec){

end\_t.tv\_sec--;

end\_t.tv\_usec += SEC\_TO\_MICRO;

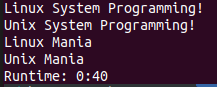
}

end\_t.tv\_usec -= begin\_t.tv\_usec;

printf("Runtime: %ld:%ld\n",end\_t.tv\_sec, end\_t.tv\_usec);

exit(0);

}

2. 실행결과