

```

#include <stdio.h>
#include <stdlib.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>
#include <unistd.h>

#define INFNAME "dup.c"
#define OUTFNAME "DUP.c"

int main ()
{
    int ifd, ofd;
    char c;

    /* Open input file descriptor */
    ifd = open(INFNAME, O_RDONLY);
    if (ifd < 0) {
        fprintf(stderr, "Unable to open input file in read mode...\n");
        exit(1);
    } else {
        fprintf(stderr, "New file descriptor obtained = %d\n", ifd);
    }

    /* Open output file descriptor */
    /* The file is created in the mode rw-r--r-- (644) */
    ofd = open(OUTFNAME, O_CREAT | O_WRONLY, S_IRUSR | S_IWUSR | S_IRGRP |
S_IROTH);
    if (ofd < 0) {
        fprintf(stderr, "Unable to open output file in write mode...\n");
        exit(2);
    } else {
        fprintf(stderr, "New file descriptor obtained = %d\n", ofd);
    }

    close(0);    /* Close the file descriptor for stdin */
    close(1);    /* Close the file descriptor for stdout */

    dup(ifd);    /* Duplicate ifd at the lowest-numbered unused descriptor */
    close(ifd);  /* ifd is no longer needed */

    dup(ofd);    /* Duplicate ofd at the lowest-numbered unused descriptor */
    close(ofd);  /* ofd is no longer needed */

    /* Read from stdin and write to stdout, as if nothing has happened */
    while (1) {
        scanf("%c", &c); /* Reading is done from the input file */
        if (feof(stdin)) break;
        if ((c >= 'a') && (c <= 'z')) c -= 'a' - 'A';
        printf("%c", c); /* Writing is done to the output file */
    }

    exit(0);
}

```