

CD_A2@CL3-15: ~/Documents/230905408/lab1

```
1 // To count the number of lines and characters in a file.
2
3 #include <stdio.h>
4 #include <stdlib.h>
5
6 int main(int argc, char* argv[]){
7     FILE *fp;
8     int ch;
9     int lines = 0, characters=0;
10
11    if(argc !=2){
12        printf("Usage: %s <filename>\n", argv[0]);
13        return 1;
14    }
15
16    fp = fopen(argv[1], "r");
17    if(fp==NULL){
18        perror("Error opening file!!!");
19        return 1;
20    }
21
22    while((ch=getc(fp)) != EOF){
23        characters++;
24        if(ch=='\n')
25            lines++;
26    }
27
28    fclose(fp);
29
30    printf("Number of lines      : %d\n", lines);
31    printf("Number of characters : %d\n", characters);
32
33 }
```

CD_A2@CL3-15: ~/Documents/230905408/lab1

```
CD_A2@CL3-15:~/Documents/230905408/lab1$ gcc q1.c
CD_A2@CL3-15:~/Documents/230905408/lab1$ ./a.out q2.c
Number of lines      : 41
Number of characters : 908
CD_A2@CL3-15:~/Documents/230905408/lab1$
```

NORMAL ➤ q1.c c ☈ utf-8 ◻ 2% 1/34Ξ %:1 [1]trai...
"q1.c" 34L, 572B



P EN 📄 15:24

CD_A2@CL3-15: ~/Documents/230905408/lab1

```
1 #include <stdio.h>
1 #include <stdlib.h>
2
3 int main(int argc, char* argv) {
4     FILE *sourceFile, *destFile;
5     char ch;
6     long fileSize, i;
7
8     sourceFile = fopen( "q1.c", "r");
9     if (sourceFile == NULL) {
10         printf("Error: Could not open source file.\n");
11         return 1;
12     }
13
14
15     destFile = fopen("output.txt", "w");
16     if (destFile == NULL) {
17         printf("Error: Could not open destination file.\n");
18         fclose(sourceFile);
19         return 1;
20     }
21
22     fseek(sourceFile, 0, SEEK_END);
23     fileSize = ftell(sourceFile);
24
25     printf("The size of the file is: %ld bytes\n", fileSize);
26
27     for (i = fileSize - 1; i >= 0; i--) {
28         fseek(sourceFile, i, SEEK_SET);
29         ch = fgetc(sourceFile);
30         fputc(ch, destFile);
31     }
32
33     printf("File reversed successfully and stored in 'output.txt'.\n");
34
35     fclose(sourceFile);
36     fclose(destFile);
37
38
39     return 0;
40 }
```

CD_A2@CL3-15: ~/Documents/230905408/lab1

```
CD_A2@CL3-15:~/Documents/230905408/lab1$ gcc q2.c
\CD_A2@CL3-15:~/Documents/230905408/lab1$ ./a.out
The size of the file is: 572 bytes
File reversed successfully and stored in 'output.txt'.
CD_A2@CL3-15:~/Documents/230905408/lab1$ cat output.txt
}
;0 nruter
;)sretcarahc ,n\d% : sretcarahc fo rebmuN(ftnirp
;)senil ,n\d% :      senil fo rebmuN(ftnirp
;)pf(esolcf
)
;++senil
)'n\'==hc(fi
;++sretcarahc
{}FOE != ))pf(cteg=hc((elihw
)
;1 nruter
;)"!!elif gninepo rorrE"(rorrep
{}LLUN==pf(fi
;)"r" ,]1[vgra(nepof = pf
)
;1 nruter
;)]0[vgra ,n\>emanelif< s% :egasU(ftnirp
{}!= cgra(fi
;0=sretcarahc ,0 = senil tni
;hc tni
;pf* ELIF
{}][vgra *rahc ,cgra tni(niam tni
>h.bildts< edulcni#
>h.oidts< edulcni#
.elif a ni sretcarahc dna senil fo rebmun eht tnuoc oT //CD_A2@CL3-15:~/Documents/230905408/lab1$
```

NORMAL ➤ q2.c
:NERDTreeToggle

c ☈ utf-8 ◁ 2% 1/41Ξ %:1 [25]tra...

P EN 🖨 15:25

CD_A2@CL3-15: ~/Documents/230905408/lab1

```
1 // A program that merges lines alternatively from 2 files and stores it in a resultant file.
2
3 #include <stdio.h>
4 #include <stdlib.h>
5
6 #define MAX_LINE 1024
7
8 int main() {
9     FILE *f1, *f2, *res;
10    char line1[MAX_LINE], line2[MAX_LINE];
11    int file1_done = 0, file2_done = 0;
12
13    f1 = fopen("q1.c", "r");
14    f2 = fopen("q2.c", "r");
15    res = fopen("merged.txt", "w");
16
17    if (f1 == NULL || f2 == NULL || res == NULL) {
18        printf("Error opening files.\n");
19        return 1;
20    }
21
22    while (!file1_done || !file2_done) {
23        if (fgets(line1, MAX_LINE, f1) != NULL) {
24            fputs(line1, res);
25        } else {
26            file1_done = 1;
27        }
28
29        if (fgets(line2, MAX_LINE, f2) != NULL) {
30            fputs(line2, res);
31        } else {
32            file2_done = 1;
33        }
34
35    printf("Files merged alternatively into 'merged.txt' successfully.\n");
36
37    fclose(f1);
38    fclose(f2);
39    fclose(res);
40
41    return 0;
42 }
```

CD_A2@CL3-15: ~/Documents/230905408/lab1

```
CD_A2@CL3-15:~/Documents/230905408/lab1$ gcc q3.c
CD_A2@CL3-15:~/Documents/230905408/lab1$ ./a.out
Files merged alternatively into 'merged.txt' successfully.
CD_A2@CL3-15:~/Documents/230905408/lab1$ cat merged.txt
// To count the number of lines and characters in a file.
#include <stdio.h>

#include <stdlib.h>
#include <stdio.h>

#include <stdlib.h>
int main(int argc, char* argv) {

    FILE *sourceFile, *destFile;
    int main(int argc, char* argv[]){
        char ch;
        FILE *fp;
        long fileSize, i;
        int ch;
        int lines = 0, characters=0;

        sourceFile = fopen( "q1.c", "r" );
        if(argc !=2){
            if (sourceFile == NULL) {
                printf("Usage: %s <filename>\n", argv[0]);
                printf("Error: Could not open source file.\n");
                return 1;
                return 1;
            }
        }

        fp = fopen(argv[1], "r");
        if(fp==NULL){
            destFile = fopen("output.txt", "w");
            perror("Error opening file!!!");
            if (destFile == NULL) {
                return 1;
                printf("Error: Could not open destination file.\n");
            }
            fclose(sourceFile);
            return 1;
            while((ch=getc(fp)) != EOF){
}
            characters++;
            if(ch=='\n')
                lines++;
        }
    }
}
```

NORMAL ➤ q3.c
:NERDTreeToggle

c ☈ utf-8 ◀ 2% 1/43Ξ %:1 [1] tra...

P EN 🖨 15:26