

**Batch: C2-2      Roll No.: 16010122109**

**Experiment / assignment / tutorial No. 8**

**Grade: AA / AB / BB / BC / CC / CD / DD**

**Signature of the Staff In-charge with date**

**TITLE:** File handling in C

**AIM:** Write a C program to copy the contents of one text file to another

**Expected OUTCOME of Experiment:**

**Books/ Journals/ Websites referred:**

1. Programming in C, second edition, Pradeep Dey and Manas Ghosh, Oxford University Press.
2. Programming in ANSI C, fifth edition, E Balagurusamy, Tata McGraw Hill.
3. Introduction to programming and problem solving, G. Michael Schneider, Wiley India edition.

**Theory:**

**Problem Definition:**

**Write a C program to**

1. Accept 5 students name and roll number from user
2. Create a new file having name "info.txt"
3. Copy students information collected in step 1 in file created in step 2 "info.txt"
4. Create one more new file having name "backup.txt"
5. Copy content of file "info.txt" into "backup.txt"

**Implementation details:**

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    // Step 1: Accept 5 students name and roll number from user
```

```
    char students[5][100];
```

```
    int rollNumbers[5];
```

```
    int i;
```

```
    for (i = 0; i < 5; i++)
```

```
    {
```

```
        printf("Enter name of student %d: ", i + 1);
```

```
        scanf("%s", students[i]);
```

```
        printf("Enter roll number of student %d: ", i + 1);
```

```
        scanf("%d", &rollNumbers[i]);
```

```
}

// Step 2: Create a new file having name "info.txt"
FILE *file = fopen("info.txt", "w");
if (file == NULL)
{
    printf("Error creating file\n");
    return 1;
}

// Step 3: Copy students information collected in step 1 in file created in step 2 "info.txt"
for (i = 0; i < 5; i++)
{
    fprintf(file, "Name: %s\tRoll Number: %d\n", students[i], rollNumbers[i]);
}

fclose(file);

// Step 4: Create one more new file having name "backup.txt"
FILE *backup = fopen("backup.txt", "w");
if (backup == NULL)
{
    printf("Error creating backup file\n");
    return 1;
}

// Step 5: Copy contain of file "info.txt" into "backup.txt"
file = fopen("info.txt", "r");
int c;
while ((c = fgetc(file)) != EOF)
{
    fputc(c, backup);
}

fclose(file);
fclose(backup);

return 0;
}
```

```
C:\Users\Lenovo\OneDrive\Desktop\c\11.exe
Enter name of student 1: aakriti
Enter roll number of student 1: 109
Enter name of student 2: arya
Enter roll number of student 2: 120
Enter name of student 3: alethea
Enter roll number of student 3: 115
Enter name of student 4: dhatri
Enter roll number of student 4: 110
Enter name of student 5: hiya
Enter roll number of student 5: 122

Process returned 0 (0x0)   execution time : 32.453 s
Press any key to continue.
```

### Conclusion:

Thus, we learned to copy the contents of one text file to another (i.e. file handling).

10 → string ends with 10

`S = "xyz 10";`

`S = [x|y|z|10]`

function Function related to string.

<code>n = strlen(s);</code>	length of string
<code>i = strcmp(s1, s2);</code>	compare 2 strings
<code>strcat(s1, s2);</code>	concat 2 strings (join 2 strings)
<code>strstr();</code>	find (a word) string in the given string
<code>strchr();</code>	find character in the given string.

→ File handling:

① void main()

{

~~FILE \*fp;~~ name of file mode

`fp = fopen("xyz.txt", "r+");`

file \*fp;

if (fp == 0)

{

`printf("The file does not exist");`

}

}

}

fp - file pointer

r - read

w - write

a - append

r+ - can read and open the file

b - binary

a/f/f

w/f/f

- file handling mode

r, w, a

r+, w+, a+

rb, wb, ab

rb+, wb+, ab+



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```
→ void main();  
{  
    file *fp;  
    fp = fopen("xyz.txt", "r+");  
    fp.close();  
    if (fp == 0) {  
        printf("The file does not exist");  
    }  
    char ch;  
    while (ch != EOF)  
    {  
        ch = fgetc(fp);  
        printf("%c", ch);  
    }  
}
```

Ex 8

14/15

12/12/23



### Post Lab Descriptive Questions

1. Write a program to append the contents of one file at the end of another.

```
#include <stdio.h>
```

```
int main(int argc, char *argv[])
{
    if (argc != 3)
    {
        printf("Usage: %s <file1> <file2>\n", argv[0]);
        return 1;
    }

    FILE *file1 = fopen(argv[1], "a");
    FILE *file2 = fopen(argv[2], "r");
    if (file1 == NULL || file2 == NULL)
    {
        printf("Error opening file\n");
        return 1;
    }

    int c;
    while ((c = fgetc(file2)) != EOF)
    {
        fputc(c, file1);
    }

    fclose(file1);
    fclose(file2);

    return 0;
}
```

Date: \_\_\_\_\_

Signature of faculty in-charge