LAB 1

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Batch B3

1) **To count the number of lines and characters in a file.**

Code:

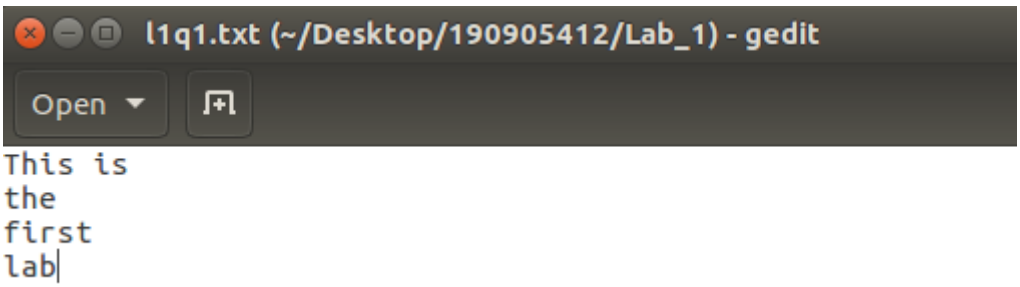
```
#include <stdio.h>
#include <stdlib.h>

int main()
{
	FILE *f1;
	int lines=0, chars=0;
	char filename[100],c;
	printf("Enter the filename to read: ");
	scanf("%s",filename);
	f1 = fopen(filename,"r");
	if(f1 == NULL)
	{
		printf("Cannot open file %s",filename);
		return 1;
	}
	while(1)
	{
		c = fgetc(f1);
		if(c==EOF)
			break;
		else if((c=='\n'))
			++lines;
		else
			++chars;
	}
	fclose(f1);
	printf("No of lines: %d\n",lines);
	printf("No of characters: %d\n",chars);
	return 0;
}
```

Output:

```
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ gcc -o Outputl1q1 Outputl1q1.c
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ ./Outputl1q1
Enter the filename to read: l1q1.txt
No of lines: 4
No of characters: 18
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$
```

2) To reverse the file



contents and store in another file.Also display the size of file using file handling function.

Code:

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

int main()
{
	FILE *f1, *f2;
	char c, buffer[1024];
	int i = 0;
	f1 = fopen("l1q2.txt", "r");
	f2 = fopen("Outl1q2.txt", "w+");
	if(f1==NULL || f2==NULL)
	{
		printf("Either the input or the output file does not exist\n");
		return 1;
	}
	while(c != EOF)
	{
		c = getc(f1);
		buffer[i++] = c;
	}
	for(int j = (i - 1) ; j >= 0 ; j--)
	{
		c = buffer[j];
		fputc(c, f2);
	}
	fseek(f1, 0, SEEK_END);
	int size = ftell(f1);
	printf("File size is: %d\n", size);
}
```

Output:

```
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ gcc -o Outputl1q2 Outputl1q2.c
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ ./Outputl1q2
File size is: 27
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ cat l1q2.txt
This is the second program
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ cat Outl1q2.txt
margorp dnoces eht si sihT
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$
```

3) That merges lines alternatively from 2 files and stores it in a resultant file.

Code:

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

int main()
{
	FILE *f1, *f2, *f3;
	char c1 , c2;
	f1 = fopen("l1q31.txt", "r");
	f2 = fopen("l1q32.txt", "r");
	f3 = fopen("Outl1q3.txt", "w");

	if (f1==NULL || f2==NULL || f3==NULL)
	{
		printf("Either the input or the output file does not exist\n");
		return 1;
	}
	while(1)
	{
		if(c1 != EOF)
		{
			c1 = fgetc(f1);
		while(c1 != '\n')
			{
				if(c1 == EOF)
					break;
				fputc(c1, f3);
				c1 = fgetc(f1);
			}
			if(c1 != EOF)
				fputc('\n', f3);
		}
		if(c2 != EOF)
		{
			c2 = fgetc(f2);
			while (c2 != '\n')
			{
				if(c2 == EOF)
					break;
```

```
                        fputc(c2, f3);
                        c2 = fgetc(f2);
                }
                if(c2 != EOF)
                        fputc('\n', f3);
        }
        if(c1 == EOF && c2 == EOF)
                break;
    }
    return 0;
}
```

Output:

```
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ gcc -o Outputl1q3 Outputl1q3.c
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ ./Outputl1q3
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ cat l1q31.txt
hello
my
name
is
juhi
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ cat l1q32.txt
blah
blah
blah
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$ cat Outl1q3.txt
hello
blah
my
blah
name
blah
is
juhi
Student@dblab-hp-21:~/Desktop/190905412/Lab_1$
```