

## CD Lab 1

### Question 1

```
// Program to count the number of lines and characters in a file
#include <stdio.h>

int main(){
    FILE *fa;
    int ca, chars=0, lines=1;
    fa = fopen("q1.c", "r");

    if (fa == NULL){
        printf("Cannot open file \n");
    }

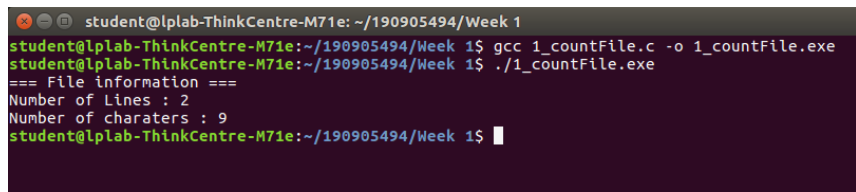
    while(ca != EOF){
        chars++;

        if(ca == '\n')
            lines++;

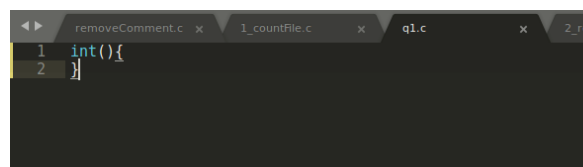
        ca = getc(fa);
    }

    printf("=== File information === \nNumber of Lines : %d\nNumber of charaters : %d\n",
lines, chars);

    fclose(fa);
    return 0;
}
```



```
student@lplab-ThinkCentre-M71e: ~/190905494/Week 1
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$ gcc 1_countFile.c -o 1_countFile.exe
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$ ./1_countFile.exe
=== File information ===
Number of Lines : 2
Number of charaters : 9
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$
```



```
removeComment.c x 1_countFile.c x q1.c x 2_re
1 int(){
2 }
```

## Question 2

// Program to count the number of lines and characters in a file

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

```
int main(){
    FILE *fa;
    int ca, chars=0, lines=1;
    fa = fopen("q1.c", "r");

    if (fa == NULL){
        printf("Cannot open file \n");
    }

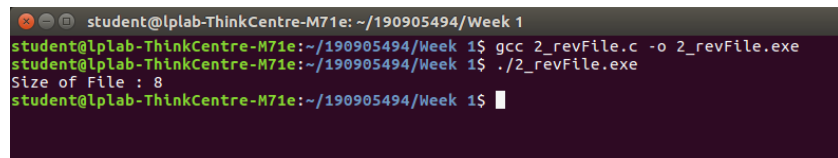
    while(ca != EOF){
        chars++;

        if(ca == '\n')
            lines++;

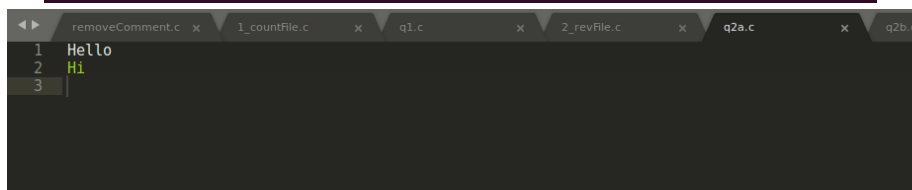
        ca = getc(fa);
    }

    printf("=== File information === \nNumber of Lines : %d\nNumber of charaters : %d\n",
lines, chars);

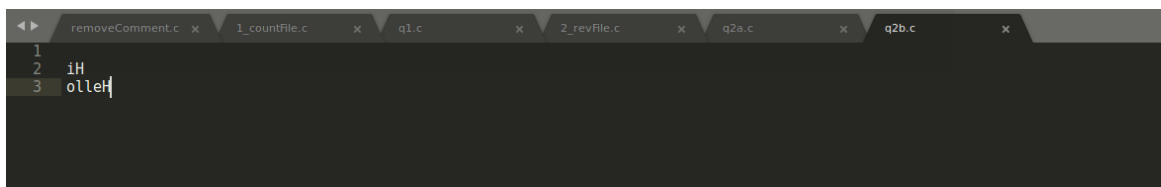
    fclose(fa);
    return 0;
}
```



```
student@lplab-ThinkCentre-M71e: ~/190905494/Week 1
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$ gcc 2_revFile.c -o 2_revFile.exe
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$ ./2_revFile.exe
Size of File : 8
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$
```



```
removeComment.c x 1_countFile.c x q1.c x 2_revFile.c x q2a.c x q2b.c
1 Hello
2 Hi
3
```



```
removeComment.c x 1_countFile.c x q1.c x 2_revFile.c x q2a.c x q2b.c x
1
2 iH
3 olleH
```

### Question 3

// Program to merge 2 files alternatively

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

```
int main()
```

```
{
```

```
    FILE *fa, *fb, *fr;
```

```
    fa = fopen("q3a.c", "r");
```

```
    fb = fopen("q3b.c", "r");
```

```
    fr = fopen("q3res.c", "w+");
```

```
    int ca, cb, flag=1;
```

```
    ca = getc(fa);
```

```
    cb = getc(fb);
```

```
    while(ca != EOF && cb != EOF){
```

```
        // printf("flag : %d\n", flag);
```

```
        if(flag==1){
```

```
            while(ca != '\n'){
```

```
                putc(ca, fr);
```

```
                ca = getc(fa);
```

```
            }
```

```
            putc(ca, fr);
```

```
            ca = getc(fa);
```

```
            flag=2;
```

```
        } else {
```

```
            while(cb != '\n'){
```

```
                putc(cb, fr);
```

```
                cb = getc(fb);
```

```
            }
```

```
            putc(cb, fr);
```

```
            cb = getc(fb);
```

```
            flag=1;
```

```
        }
```

```
    }
```

```
    while(!feof(fa)){
```

```
        putc(ca, fr);
```

```
        ca = getc(fa);
```

```
    }
```

```
    while(!feof(fb)){
```

```
        putc(cb, fr);
```

```
        cb = getc(fb);
```

```
    }
```

```
    fclose(fa);
```

```
fclose(fb);  
return 0;  
}
```

```
student@lplab-ThinkCentre-M71e: ~/190905494/Week 1  
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$ gcc 3_mergeAlt.c -o 3_mergeAlt.exe  
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$ ./3_mergeAlt.exe  
student@lplab-ThinkCentre-M71e:~/190905494/Week 1$
```

```
removeComment.c x 1_countFile.c x q1.c x 2_revFile.c x q2a.c x q2b.c x 3_mergeAlt.c x q3a.c x q3b.c  
1 hello  
2 are  
3
```

```
removeComment.c x 1_countFile.c x q1.c x 2_revFile.c x q2a.c x q2b.c x 3_mergeAlt.c x q3a.c x q3b.c x q3res.c x  
1 how  
2 you  
3
```

```
removeComment.c x 1_countFile.c x q1.c x 2_revFile.c x q2a.c x q2b.c x 3_mergeAlt.c x q3a.c x q3b.c x q3res.c x  
1 hello  
2 how  
3 are  
4 you  
5
```