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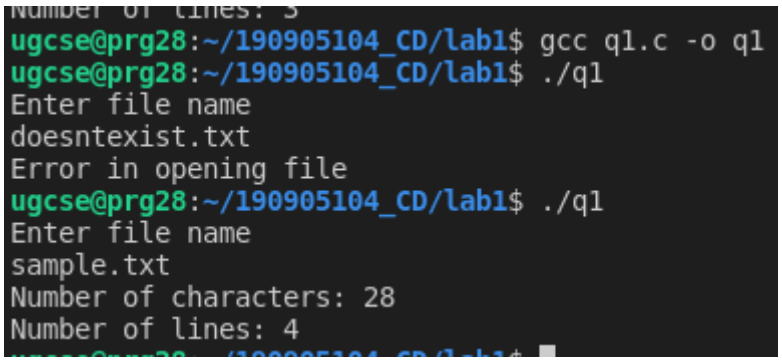
190905104
Lab 1

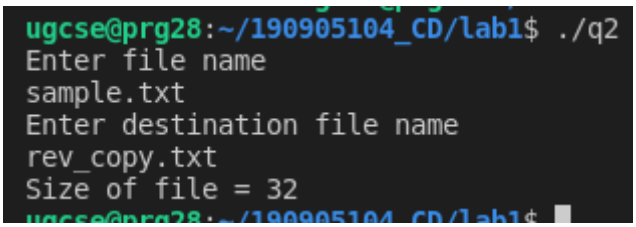
1)

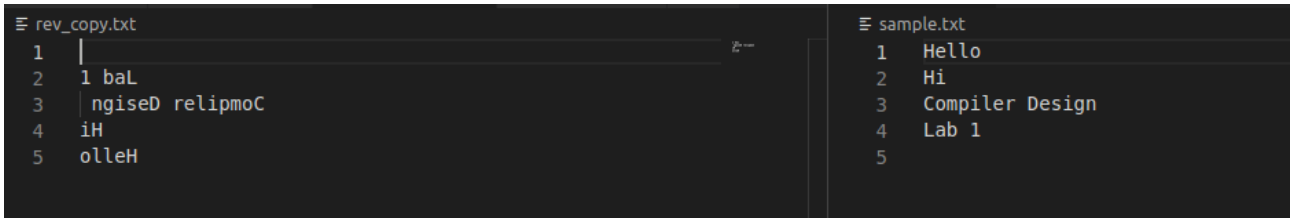
```
// To count the number of lines and characters in a file.
#include <stdlib.h>
#include <stdio.h>

int main(){
   FILE *fptr;
   char filename[100], c;
   printf("Enter file name\n");
   scanf("%s", filename);
   fptr = fopen(filename, "r");
   if(fptr == NULL){
      printf("Error in opening file\n");
      exit(1);
   }
   c = fgetc(fptr);
   int count_char = 0, count_line = 0;
   while(c!=EOF){
      if(c != '\n'){
         count_char++;
      }
      else if(c == '\0' || c == '\n'){
         count_line++;
      }
      // printf("%c", c);
      c = fgetc(fptr);
   }
   printf("Number of characters: %d\n", count_char);
   printf("Number of lines: %d\n", count_line);
   fclose(fptr);
   return 0;
}
```



2)
// To reverse the file contents and store in another file. Also display the size of file
// using file handling function.

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

int main(){
   FILE *f1, *f2;
   char filename[100], c;
   printf("Enter file name\n");
   scanf("%s", filename);
   f1 = fopen(filename, "r");
   if(f1 == NULL){
      printf("Error in opening file\n");
      exit(1);
   }
   printf("Enter destination file name\n");
   scanf("%s", filename);
   f2 = fopen(filename, "w+");
   // go to end of f1
   fseek(f1, 0, SEEK_END);
   int ft = ftell(f1);
   int i = 0;
   // printf("%d\n", ft);
   while(i < ft){
      i++;
      fseek(f1, -i, SEEK_END);
      c = fgetc(f1);
      fputc(c, f2);
   }
   printf("Size of file = %li\n", ftell(f2));
   fclose(f1);
   fclose(f2);
   return 0;
}
```





3)

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

int main(){
   FILE *f1, *f2, *f3;
   char filename[100], c1, c2;
   printf("Enter file name\n");
   scanf("%s", filename);
   f1 = fopen(filename, "r");
   if(f1 == NULL){
      printf("Error in opening file\n");
      exit(1);
   }
   printf("Enter file name\n");
   scanf("%s", filename);
   f2 = fopen(filename, "r");
   if(f2 == NULL){
      printf("Error in opening file\n");
      exit(1);
   }
   printf("Enter destination file name\n");
   scanf("%s", filename);
   f3 = fopen(filename, "w+");
   // flag to to alternate between two files
   int file1 = 0;
   while(1){
      if(file1 == 0){

         if(c1 != EOF){
            c1 = fgetc(f1);
            while(c1 != '\n'){
               if(c1 == EOF) break;
               // printf("%c", c);
               fputc(c1, f3);
               c1 = fgetc(f1);
            }
            fputc('\n', f3);
            file1 = 1;
         }
         else{
            file1 = 1;
         }
      }
      if(file1 == 1){

         if(c2 != EOF){
            c2 = fgetc(f2);
            while(c2 != '\n'){
               if(c2 == EOF) break;
               fputc(c2, f3);
               c2 = fgetc(f2);
```

```
            }
            fputc('\n', f3);
            file1 = 0;
        }
        else{
            file1 = 0;
        }
    }

    if(c1 == EOF && c2 == EOF){
        break;
    }
  }
  fclose(f1);
  fclose(f2);
  fclose(f3);
  return 0;
}
```

```
ugcse@prg28:~/190905104_CD/lab1$ gcc q3.c -o q3
ugcse@prg28:~/190905104_CD/lab1$ ./q3
Enter file name
file1.txt
Enter file name
file2.txt
Enter destination file name
file3.txt
ugcse@prg28:~/190905104_CD/lab1$
```