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Assignment No 14 and 15

File handling: Study and implementation file operations.
Programs to demonstrate simple read and write operation on the external text file.

1) Write a program in C to create and store information in a text file.

```
  #include <stdio.h>

#include <stdlib.h>

int main()
{
   char str[1000];
   FILE *fptr;
   char fname[20]="test.txt";

       fptr=fopen(fname,"w");
   if(fptr==NULL)
   {
      printf(" Error in opening file!");
      exit(1);
   }
   printf(" Input a sentence for the file : ");
   fgets(str, sizeof str, stdin);
   fprintf(fptr,"%s",str);
   fclose(fptr);
   printf("\n The file %s created successfully...!!\n\n",fname);
   return 0;
}
```

OUTPUT

```
Input a sentence for the file : C is a  programming language

 The file test.txt created successfully...!!
```

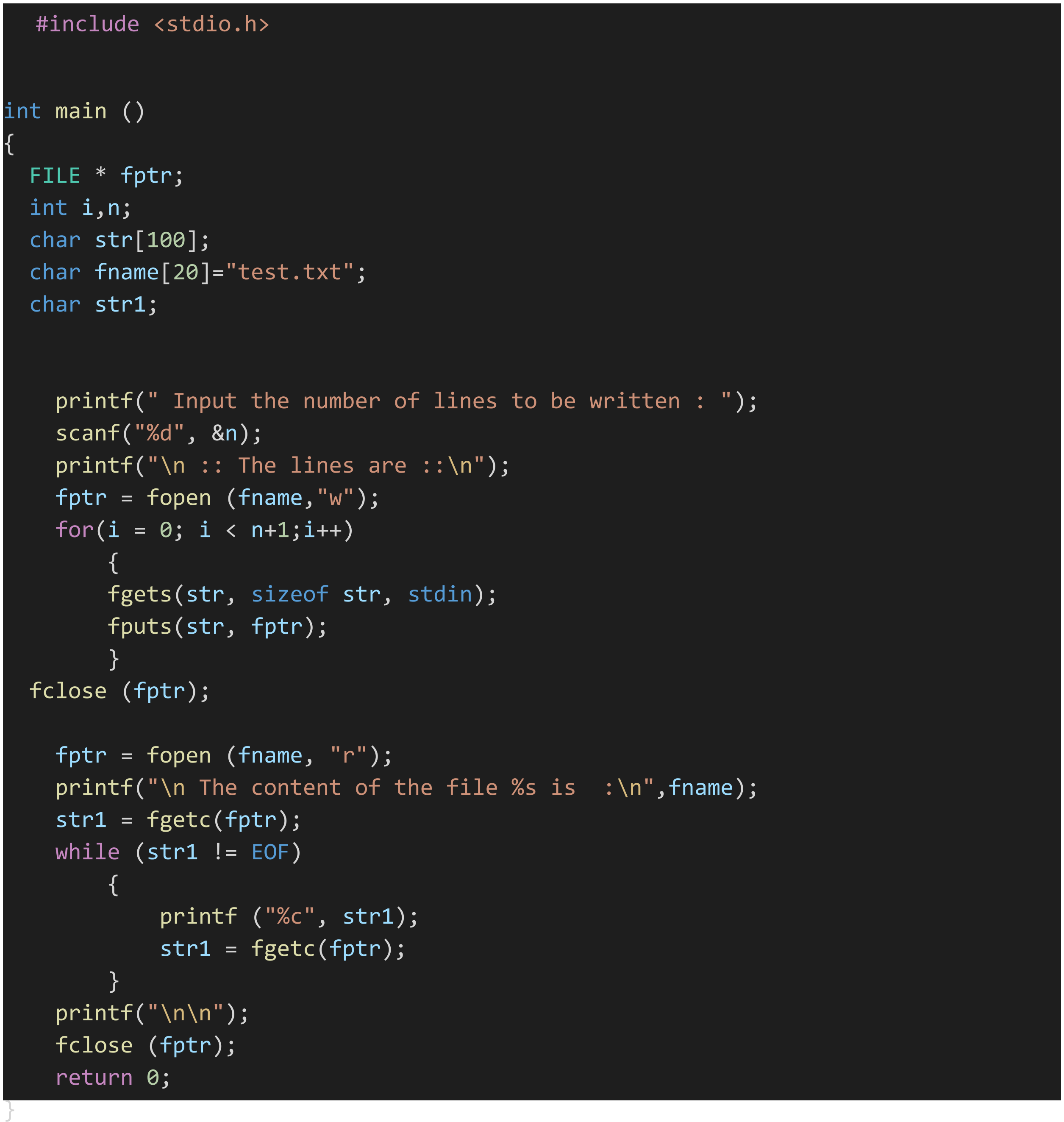
2) Write a program in C to read an existing file.

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

void main()
{
    FILE *fptr;
    char fname[20];
    char str;

    printf(" Input the filename to be opened : ");
    scanf("%s",fname);
    fptr = fopen (fname, "r");
    if (fptr == NULL)
    {
        printf(" File does not exist or cannot be opened.\n");
        exit(0);
    }
    printf("\n The content of the file %s is  :\n",fname);
    str = fgetc(fptr);
    while (str != EOF)
        {
            printf ("%c", str);
            str = fgetc(fptr);
        }
    fclose(fptr);
    printf("\n\n");
}
```

OUTPUT

```
Input the filename to be opened : test.txt

 The content of the file test.txt is  :
C is a  programming language
```

3) Write a program in C to write multiple lines in a text file.



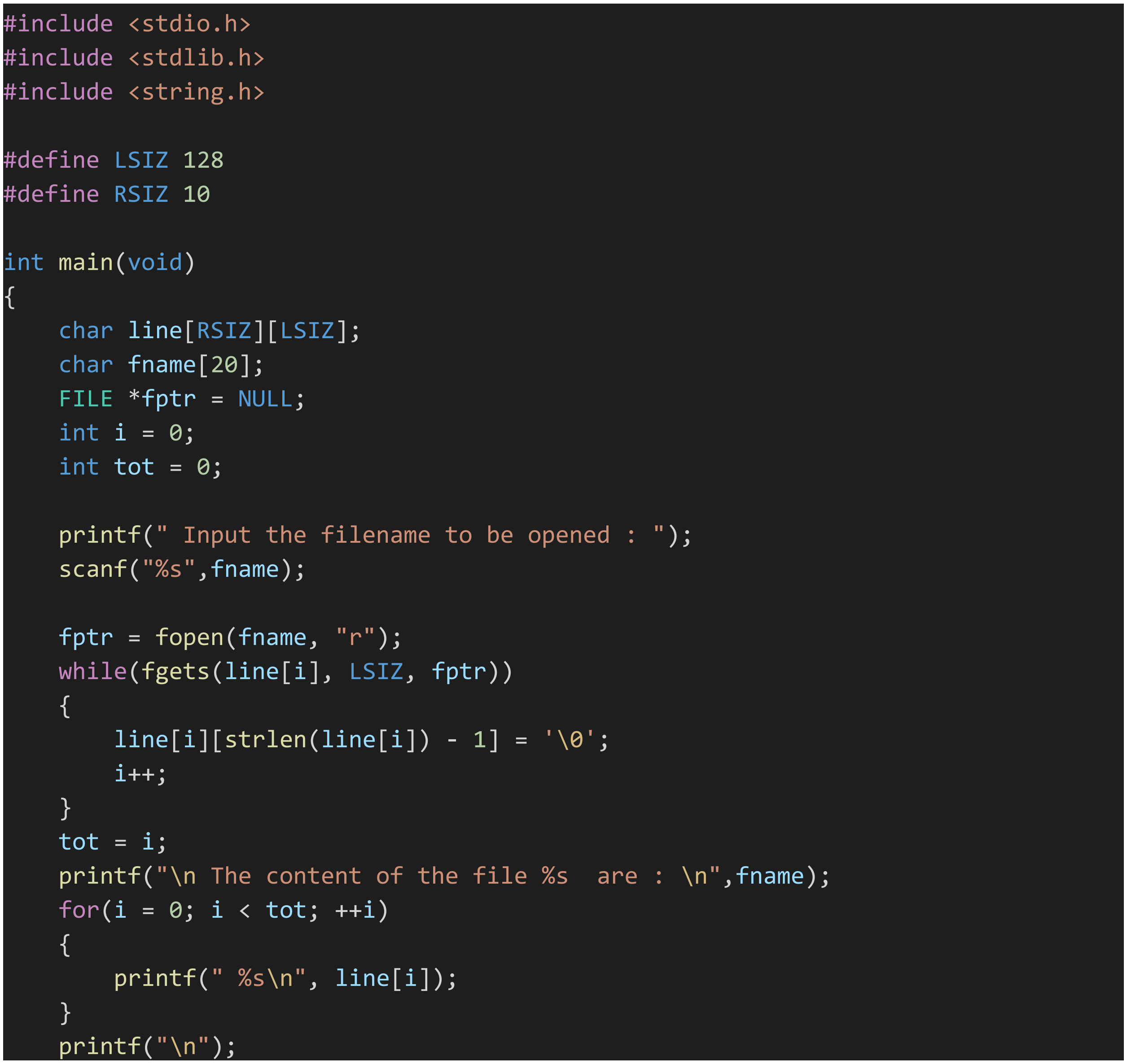
```
  #include <stdio.h>


int main ()
{
  FILE * fptr;
  int i,n;
  char str[100];
  char fname[20]="test.txt";
  char str1;


    printf(" Input the number of lines to be written : ");
    scanf("%d", &n);
    printf("\n :: The lines are ::\n");
    fptr = fopen (fname,"w");
    for(i = 0; i < n+1;i++)
        {
        fgets(str, sizeof str, stdin);
        fputs(str, fptr);
        }
  fclose (fptr);

    fptr = fopen (fname, "r");
    printf("\n The content of the file %s is  :\n",fname);
    str1 = fgetc(fptr);
    while (str1 != EOF)
        {
            printf ("%c", str1);
            str1 = fgetc(fptr);
        }
    printf("\n\n");
    fclose (fptr);
    return 0;
}
```

OUTPUT
variables in C are called as litrals.

The content of the file test.txt is :

C is a programming language
C consists of 32 key words
constants in C are called as identifiers.
variables in C are called as literals.

4) Write a program in C to read the file and store the lines into an array.



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

#define LSIZ 128
#define RSIZ 10

int main(void)
{
    char line[RSIZ][LSIZ];
    char fname[20];
    FILE *fptr = NULL;
    int i = 0;
    int tot = 0;

    printf(" Input the filename to be opened : ");
    scanf("%s",fname);

    fptr = fopen(fname, "r");
    while(fgets(line[i], LSIZ, fptr))
    {
        line[i][strlen(line[i]) - 1] = '\0';
        i++;
    }
    tot = i;
    printf("\n The content of the file %s  are : \n",fname);
    for(i = 0; i < tot; ++i)
    {
        printf(" %s\n", line[i]);
    }
    printf("\n");
    return 0;
}
```

5) Write a program in C to Find the Number of Lines in a Text File.

```
#include <stdio.h>

#define FSIZE 100

int main()
{
    FILE *fptr;
    int ctr = 0;
    char fname[FSIZE];
    char c;

    printf(" Input the file name to be opened : ");
    scanf("%s",fname);

    fptr = fopen(fname, "r");
    if (fptr == NULL)
    {
        printf("Could not open file %s", fname);
        return 0;
    }

    for (c = getc(fptr); c != EOF; c = getc(fptr))
        if (c == '\n')
    ctr = ctr + 1;
    fclose(fptr);
    printf(" The lines in the file %s are : %d \n \n", fname, ctr-1);
    return 0;
}
```

OUTPUT

```
Input the file name to be opened : test.txt
 The lines in the file test.txt are : 4
```

6) Write a program in C to find the content of the file and number of lines in a Text File.

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

#define LSIZ 128
#define RSIZ 10

int main(void)
{
    char line[RSIZ][LSIZ];
    char fname[20];
    FILE *fptr = NULL;
    int i = 0;
    int tot = 0;

    printf(" Input the file name to be opened : ");
    scanf("%s",fname);

    fptr = fopen(fname, "r");

    while(fgets(line[i], LSIZ, fptr))
    {
        line[i][strlen(line[i]) - 1] = '\0';
        i++;
    }
    tot = i;
    printf("\n The content of the file %s  are : \n",fname);
    for(i = 0; i < tot; ++i)
    {
        printf(" %s\n", line[i]);
    }

    printf("\n The lines in the file are : %d\n",tot-1);
    printf("\n");

    return 0;
}
```

OUTPUT

```
The content of the file test.txt  are :

 C is a programming language
 C consists of 32 key words
 constants in C are called as identifiers.
 variables in C are called as literals.

 The lines in the file are : 4
```

7) Write a program in C to count a number of words and characters in a file.

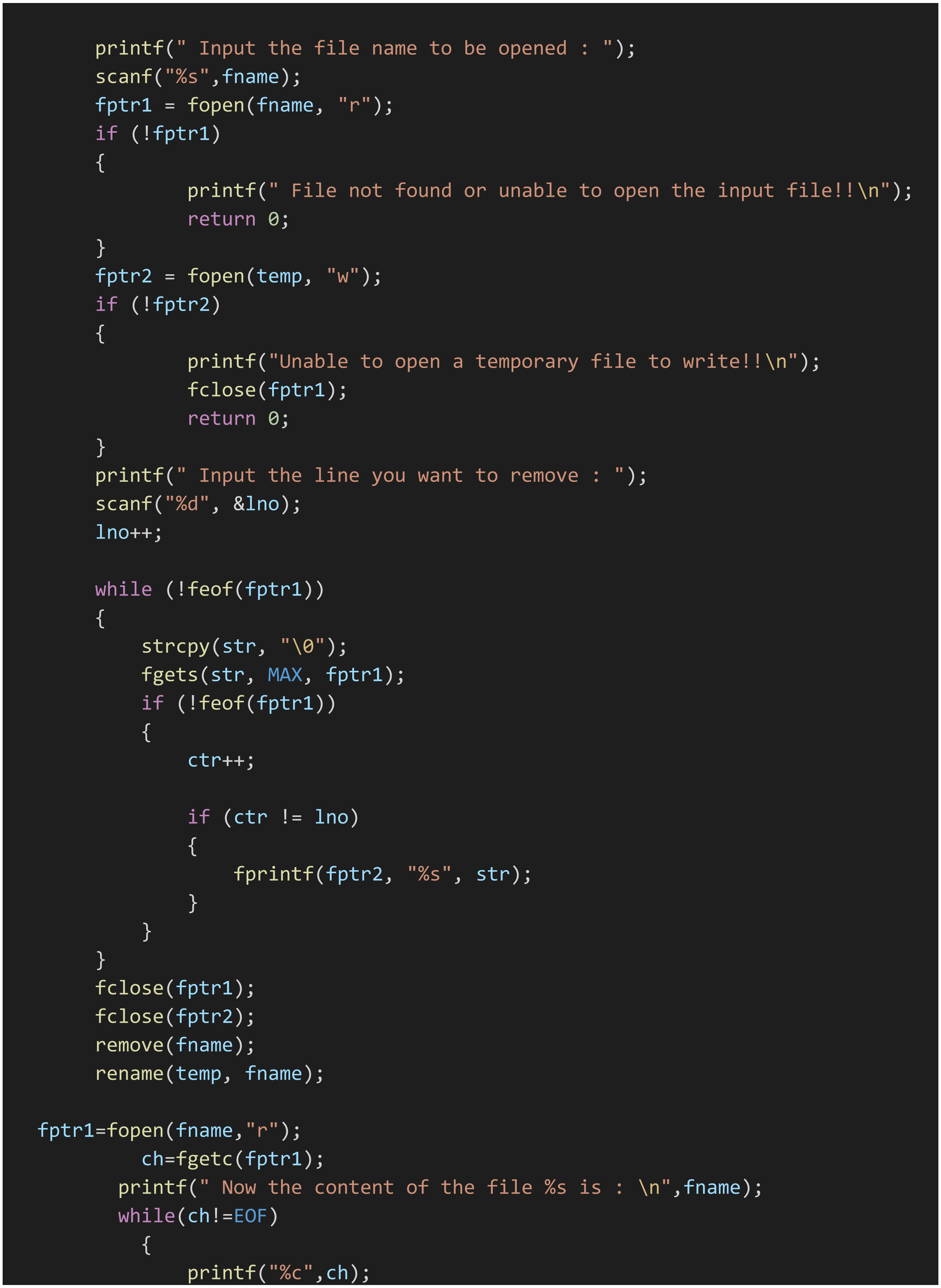
```c
#include <stdio.h>
#include <stdlib.h>

void main()
{
    FILE *fptr;
    char ch;
    int wrd=1,charctr=1;
    char fname[20];

    printf(" Input the filename to be opened : ");
    scanf("%s",fname);

    fptr=fopen(fname,"r");
    if(fptr==NULL)
     {
         printf(" File does not exist or can not be opened.");
      }
    else
        {
          ch=fgetc(fptr);
          printf(" The content of the file %s are : ",fname);
          while(ch!=EOF)
            {
                printf("%c",ch);
                if(ch==' '||ch=='\n')
                    {
                        wrd++;
                    }
                    else
                    {
                        charctr++;
                    }
                ch=fgetc(fptr);
            }
        printf("\n The number of words in the  file %s are : %d\n",fname,wrd-2);
        printf(" The number of characters in the  file %s are : %d\n\n",fname,cha
rctr-1);
        }
    fclose(fptr);
}
```

OUTPUT

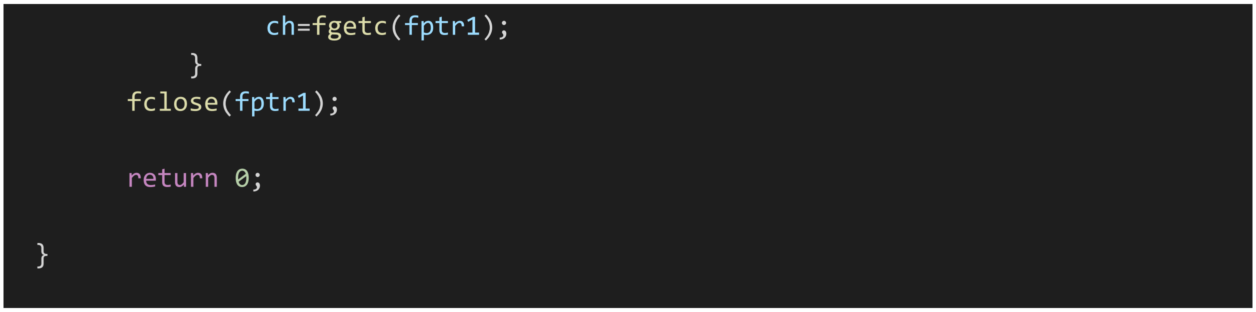
```
Input the filename to be opened : test.txt
 The content of the file test.txt are :
C is a programming language
C consists of 32 key words
constants in C are called as identifiers.
variables in C are called as literals.

 The number of words in the  file test.txt are : 26
 The number of characters in the  file test.txt are : 110
```

8) Write a program in C to delete a specific line from a file.

```
 #include <stdio.h>

#include <string.h>

#define MAX 256

  int main()
  {
        int lno, ctr = 0;
        char ch;
        FILE *fptr1, *fptr2;
        char fname[MAX];
        char str[MAX], temp[] = "temp.txt";
```



```
     printf(" Input the file name to be opened : ");
     scanf("%s",fname);
     fptr1 = fopen(fname, "r");
     if (!fptr1)
     {
             printf(" File not found or unable to open the input file!!\n");
             return 0;
     }
     fptr2 = fopen(temp, "w");
     if (!fptr2)
     {
             printf("Unable to open a temporary file to write!!\n");
             fclose(fptr1);
             return 0;
     }
     printf(" Input the line you want to remove : ");
     scanf("%d", &lno);
     lno++;

     while (!feof(fptr1))
     {
         strcpy(str, "\0");
         fgets(str, MAX, fptr1);
         if (!feof(fptr1))
         {
             ctr++;

             if (ctr != lno)
             {
                 fprintf(fptr2, "%s", str);
             }
         }
     }
     fclose(fptr1);
     fclose(fptr2);
     remove(fname);
     rename(temp, fname);

fptr1=fopen(fname,"r");
         ch=fgetc(fptr1);
       printf(" Now the content of the file %s is : \n",fname);
       while(ch!=EOF)
         {
             printf("%c",ch);
```



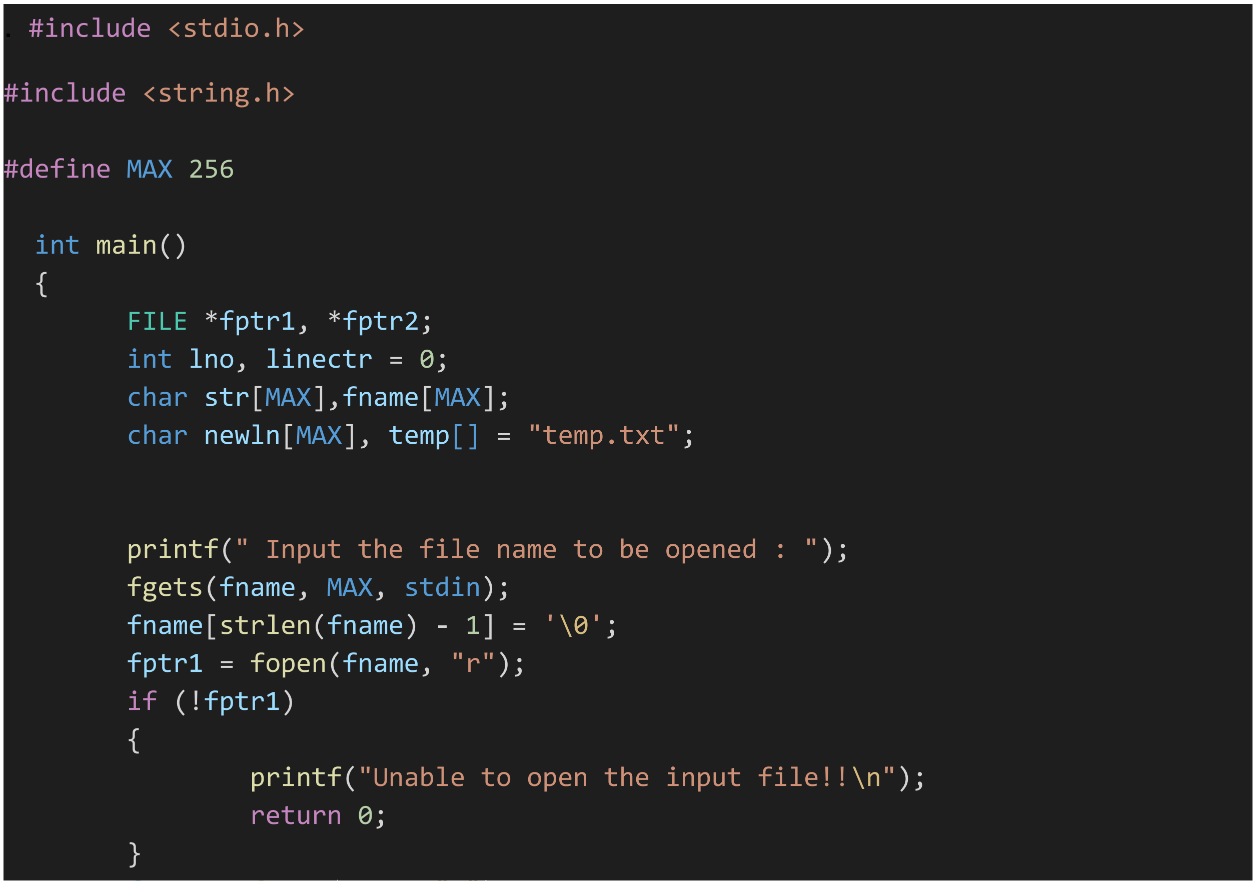
```
                ch=fgetc(fptr1);
            }
        fclose(fptr1);

        return 0;

  }
```

OUTPUT

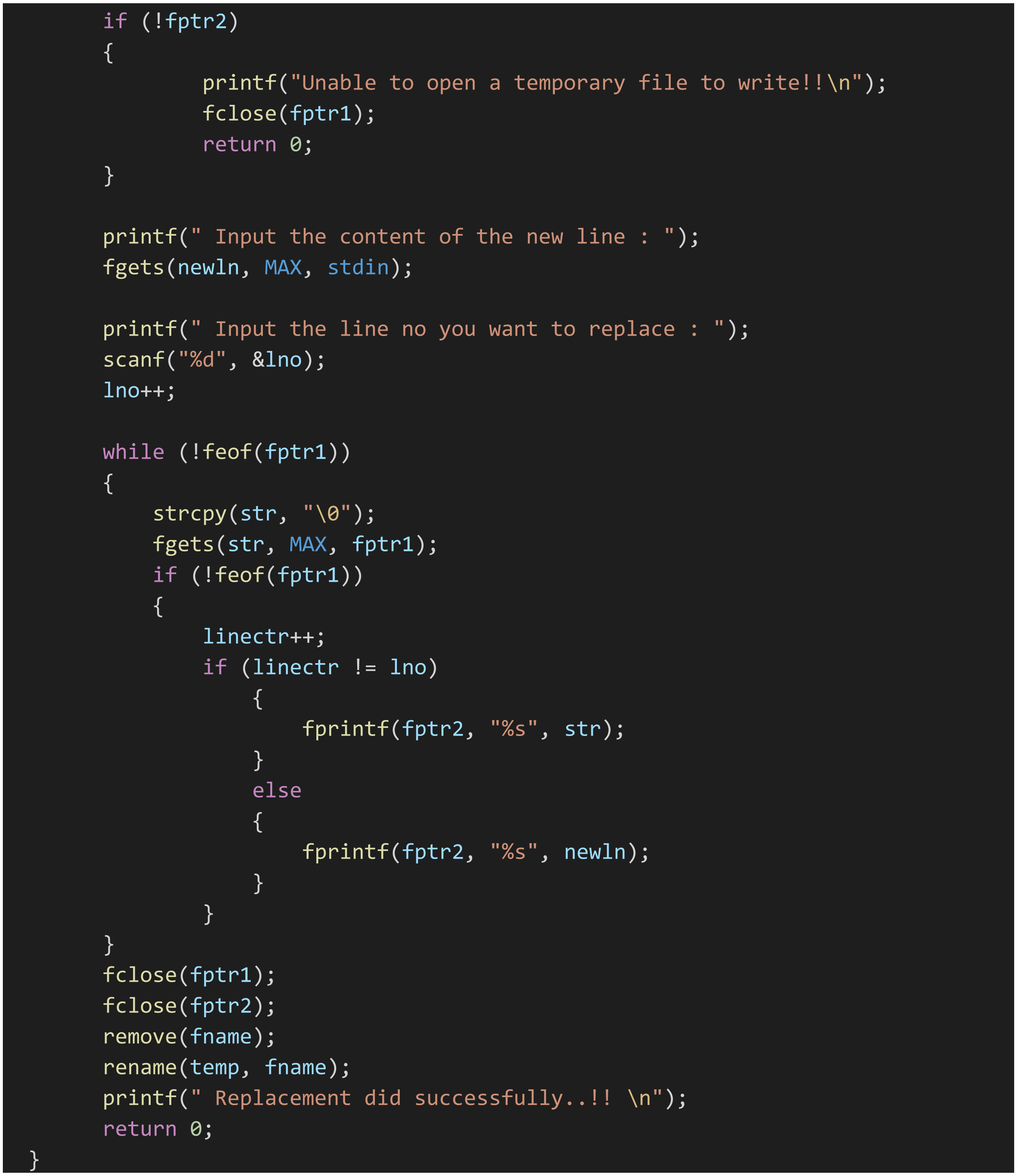
Input the file name to be opened : test.txt
 Input the line you want to remove : 2
 Now the content of the file test.txt is :

C is a programming language
constants in C are called as identifiers.
variables in C are called as literals.

9) Write a program in C to replace a specific line with another text in a file



```
 #include <stdio.h>

#include <string.h>

#define MAX 256

  int main()
  {
        FILE *fptr1, *fptr2;
        int lno, linectr = 0;
        char str[MAX],fname[MAX];
        char newln[MAX], temp[] = "temp.txt";


        printf(" Input the file name to be opened : ");
        fgets(fname, MAX, stdin);
        fname[strlen(fname) - 1] = '\0';
        fptr1 = fopen(fname, "r");
        if (!fptr1)
        {
                printf("Unable to open the input file!!\n");
                return 0;
        }
        fptr2 = fopen(temp, "w");
```



```
        if (!fptr2)
        {
                printf("Unable to open a temporary file to write!!\n");
                fclose(fptr1);
                return 0;
        }

        printf(" Input the content of the new line : ");
        fgets(newln, MAX, stdin);

        printf(" Input the line no you want to replace : ");
        scanf("%d", &lno);
        lno++;

        while (!feof(fptr1))
        {
            strcpy(str, "\0");
            fgets(str, MAX, fptr1);
            if (!feof(fptr1))
            {
                linectr++;
                if (linectr != lno)
                    {
                        fprintf(fptr2, "%s", str);
                    }
                    else
                    {
                        fprintf(fptr2, "%s", newln);
                    }
                }
        }
        fclose(fptr1);
        fclose(fptr2);
        remove(fname);
        rename(temp, fname);
        printf(" Replacement did successfully..!! \n");
        return 0;
  }
```

OUTPUT

```
Input the file name to be opened : test.txt
 Input the content of the new line : There are two types of constant in C , primary and
secondary.
 Input the line no you want to replace : 4
```

Replacement did successfully..!!

10) Write a program in C to append multiple lines at the end of a text file.

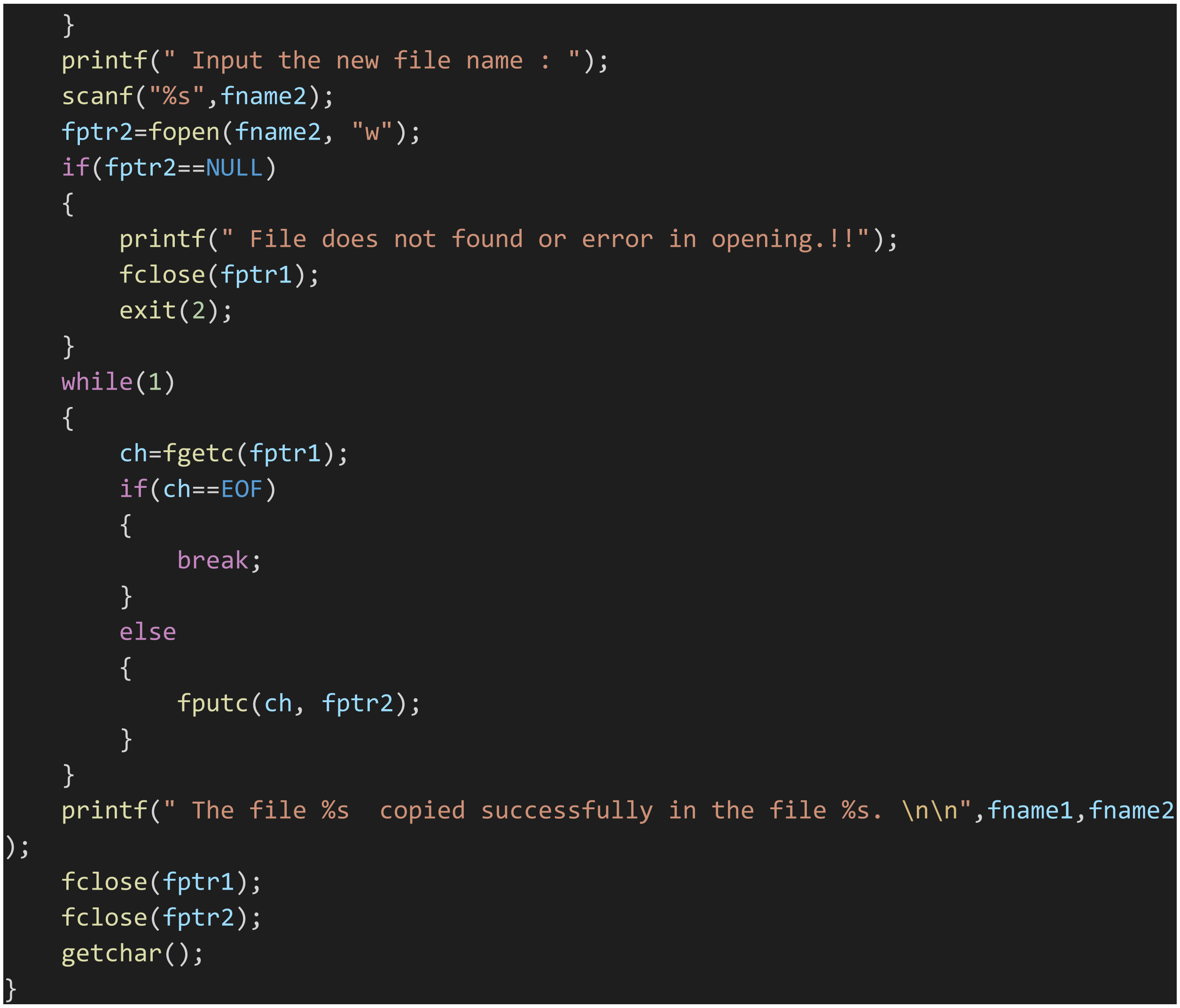
```
#include <stdio.h>

int main ()
{
  FILE * fptr;
  int i,n;
  char str[100];
  char fname[20];
  char str1;


    printf(" Input the file name to be opened : ");
    scanf("%s",fname);
    fptr = fopen(fname, "a");
    printf(" Input the number of lines to be written : ");
    scanf("%d", &n);
    printf(" The lines are : \n");
    for(i = 0; i < n+1;i++)
    {
    fgets(str, sizeof str, stdin);
    fputs(str, fptr);
  }
  fclose (fptr);

    fptr = fopen (fname, "r");
    printf("\n The content of the file %s is  :\n",fname);
    str1 = fgetc(fptr);
    while (str1 != EOF)
        {
            printf ("%c", str1);
            str1 = fgetc(fptr);
        }
    printf("\n\n");
    fclose (fptr);

  return 0;
}
```

OUTPUT

```
Input the file name to be opened : test.txt
 Input the number of lines to be written : 3
 The lines are :
there are three types of primary constants
they are : real ,integer and character constants
A constant is an entity that  never changes

 The content of the file test.txt is  :

C is a programming language
constants in C are called as identifiers.
variables in C are called as litrals.

there are three types of primary constants
they are : real ,integer and character constants
A constant is an entity that  never changes
```

11) Write a program in C to copy a file in another name.

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

void main()
{
    FILE *fptr1, *fptr2;
    char ch, fname1[20], fname2[20];

    printf("\n\n Copy a file in another name :\n");
    printf("----------------------------------\n");

    printf(" Input the source file name : ");
    scanf("%s",fname1);

    fptr1=fopen(fname1, "r");
    if(fptr1==NULL)
    {
        printf(" File does not found or error in opening.!!");
        exit(1);
```

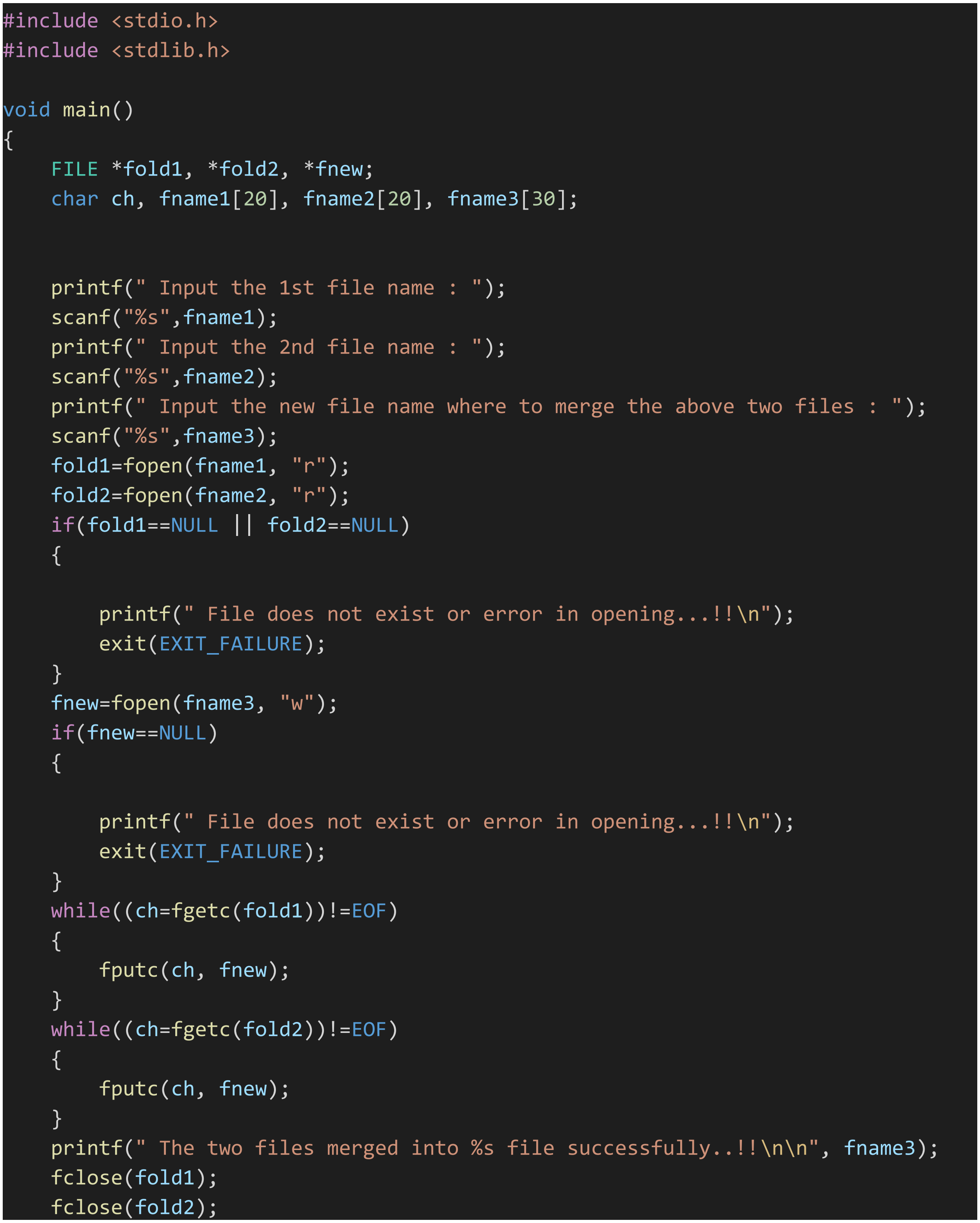


```
    }
    printf(" Input the new file name : ");
    scanf("%s",fname2);
    fptr2=fopen(fname2, "w");
    if(fptr2==NULL)
    {
        printf(" File does not found or error in opening.!!");
        fclose(fptr1);
        exit(2);
    }
    while(1)
    {
        ch=fgetc(fptr1);
        if(ch==EOF)
        {
            break;
        }
        else
        {
            fputc(ch, fptr2);
        }
    }
    printf(" The file %s  copied successfully in the file %s. \n\n",fname1,fname2
);
    fclose(fptr1);
    fclose(fptr2);
    getchar();
}
```

OUTPUT

```
Copy a file in another name :
-----------------------------------
 Input the source file name : test.txt
 Input the new file name : programinginc.txt
 The file test.txt  copied successfully in the file programinginc.txt.
```

12) Write a program in C to merge two files and write it in a new file.



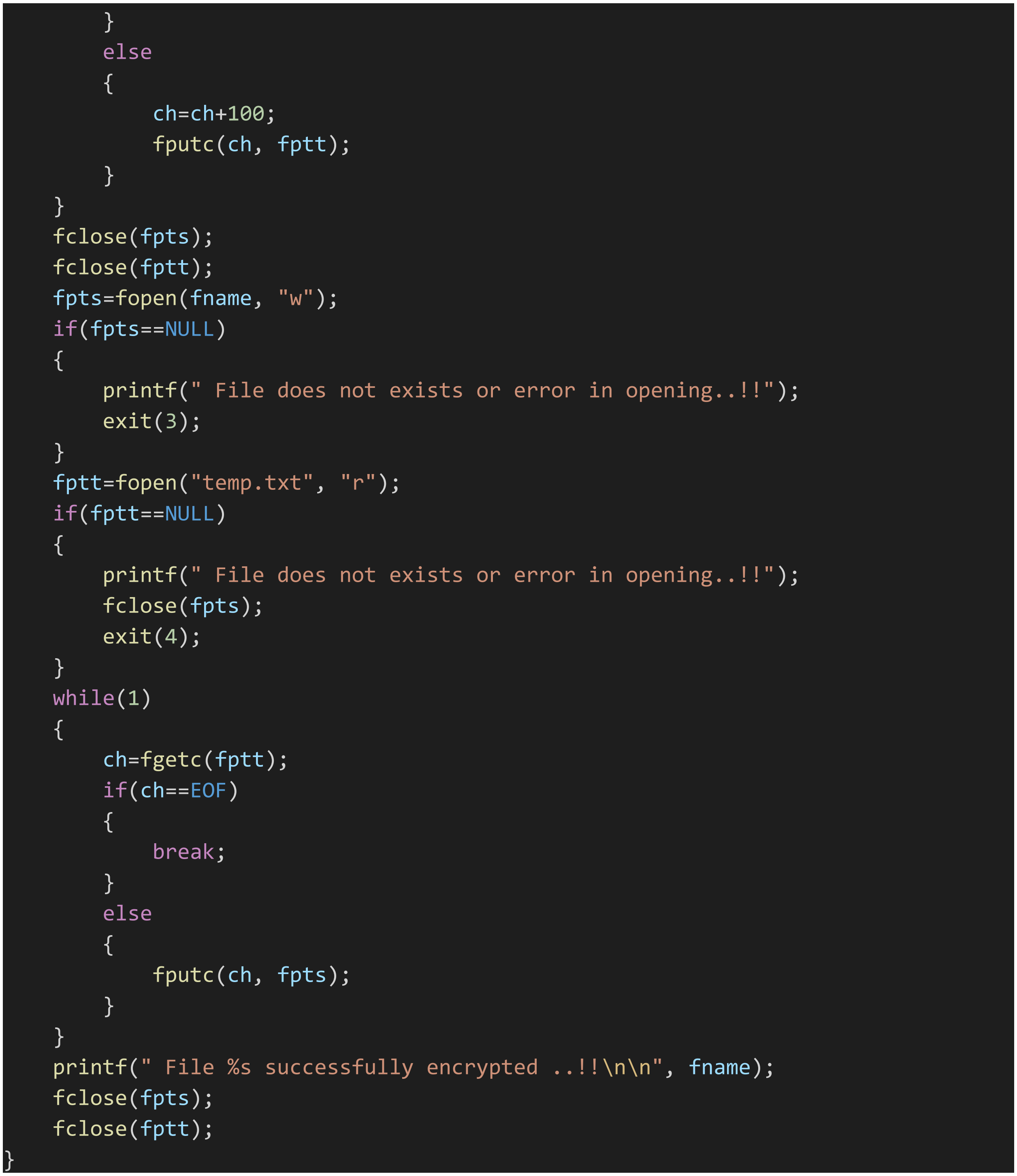
```
#include <stdio.h>
#include <stdlib.h>

void main()
{
    FILE *fold1, *fold2, *fnew;
    char ch, fname1[20], fname2[20], fname3[30];


    printf(" Input the 1st file name : ");
    scanf("%s",fname1);
    printf(" Input the 2nd file name : ");
    scanf("%s",fname2);
    printf(" Input the new file name where to merge the above two files : ");
    scanf("%s",fname3);
    fold1=fopen(fname1, "r");
    fold2=fopen(fname2, "r");
    if(fold1==NULL || fold2==NULL)
    {

        printf(" File does not exist or error in opening...!!\n");
        exit(EXIT_FAILURE);
    }
    fnew=fopen(fname3, "w");
    if(fnew==NULL)
    {

        printf(" File does not exist or error in opening...!!\n");
        exit(EXIT_FAILURE);
    }
    while((ch=fgetc(fold1))!=EOF)
    {
        fputc(ch, fnew);
    }
    while((ch=fgetc(fold2))!=EOF)
    {
        fputc(ch, fnew);
    }
    printf(" The two files merged into %s file successfully..!!\n\n", fname3);
    fclose(fold1);
    fclose(fold2);
    fclose(fnew);
}
```

OUTPUT

```
Input the 1st file name : test.txt
 Input the 2nd file name : programinginc.txt
 Input the new file name where to merge the above two files : Clang.txt
 The two files merged into Clang.txt file successfully..!!
```

13) Write a program in C to encrypt a text file.

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

void main()
{
    char fname[20], ch;
    FILE *fpts, *fptt;



    printf(" Input the name of file to encrypt : ");
    scanf("%s",fname);

    fpts=fopen(fname, "r");
    if(fpts==NULL)
    {
        printf(" File does not exists or error in opening..!!");
        exit(1);
    }
    fptt=fopen("temp.txt", "w");
    if(fptt==NULL)
    {
        printf(" Error in creation of file temp.txt ..!!");
        fclose(fpts);
        exit(2);
    }
    while(1)
    {
        ch=fgetc(fpts);
        if(ch==EOF)
        {
            break;
```

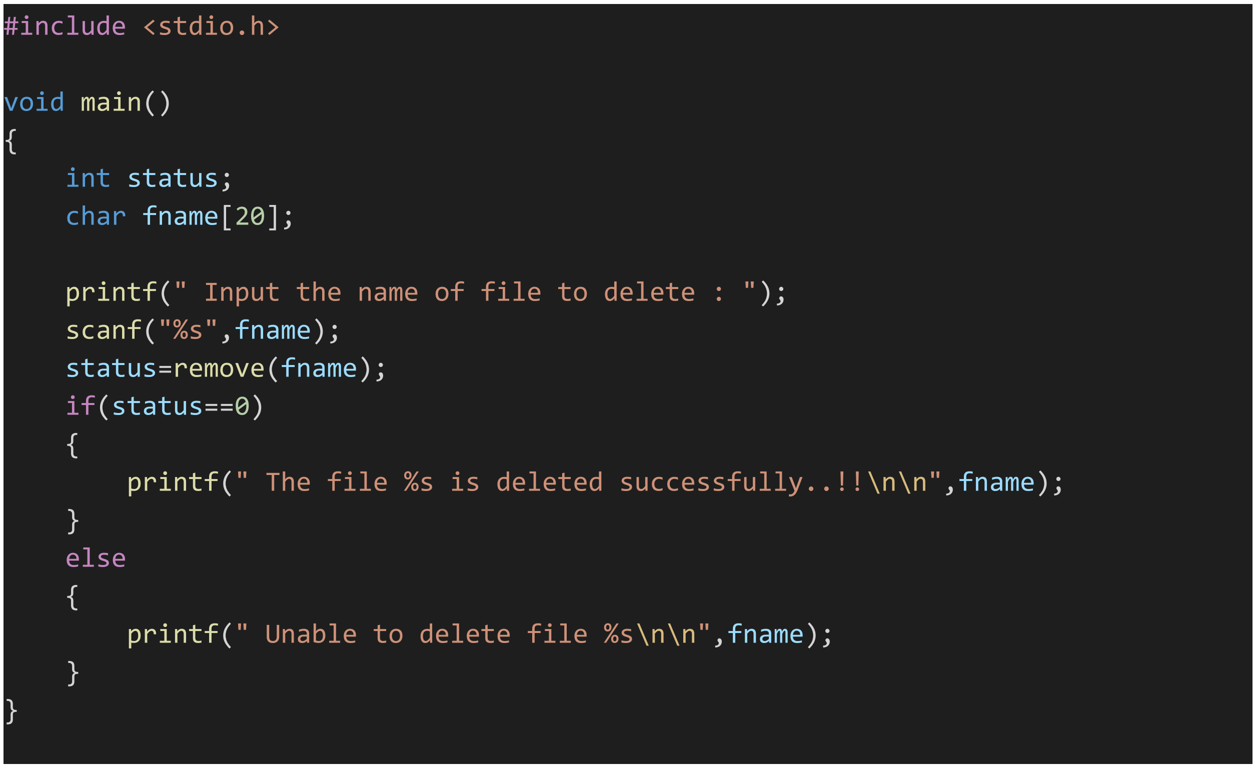


```
        }
        else
        {
            ch=ch+100;
            fputc(ch, fptt);
        }
    }
    fclose(fpts);
    fclose(fptt);
    fpts=fopen(fname, "w");
    if(fpts==NULL)
    {
        printf(" File does not exists or error in opening..!!");
        exit(3);
    }
    fptt=fopen("temp.txt", "r");
    if(fptt==NULL)
    {
        printf(" File does not exists or error in opening..!!");
        fclose(fpts);
        exit(4);
    }
    while(1)
    {
        ch=fgetc(fptt);
        if(ch==EOF)
        {
            break;
        }
        else
        {
            fputc(ch, fpts);
        }
    }
    printf(" File %s successfully encrypted ..!!\n\n", fname);
    fclose(fpts);
    fclose(fptt);
}
```

OUTPUT

```
Input the name of file to encrypt : test.txt
 File test.txt successfully encrypted ..!!
```

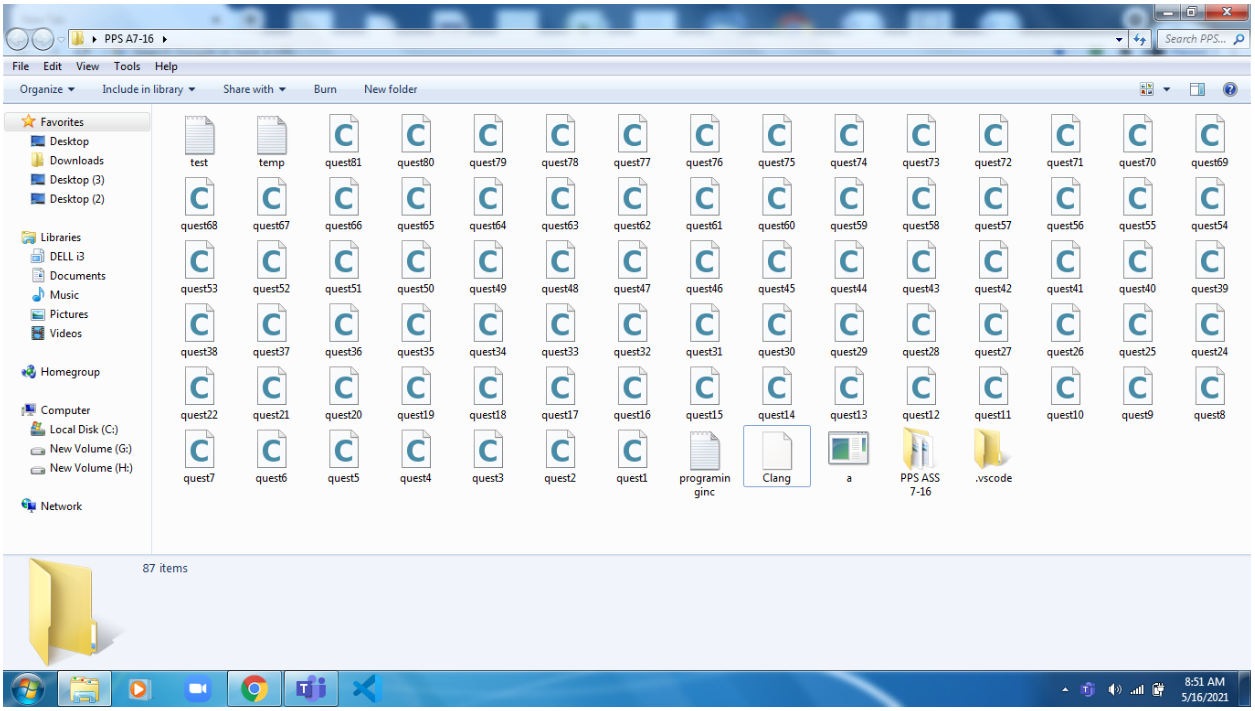
14) Write a program in C to remove a file from the disk.



```c
#include <stdio.h>

void main()
{
    int status;
    char fname[20];

    printf(" Input the name of file to delete : ");
    scanf("%s",fname);
    status=remove(fname);
    if(status==0)
    {
        printf(" The file %s is deleted successfully..!!\n\n",fname);
    }
    else
    {
        printf(" Unable to delete file %s\n\n",fname);
    }
}
```

OUTPUT

```
Input the name of file to delete : Clang.txt

 The file Clang.txt is deleted successfully..!!
```


PPS A7-16
Search PPS...
File
Edit
View
Tools
Help
Organize
Include in library
Share with
Burn
New folder
Favorites
Desktop
Downloads
Desktop (3)
Desktop (2)
Libraries
DELL i3
Documents
Music
Pictures
Videos
Homegroup
Computer
Local Disk (C:)
New Volume (G:)
New Volume (H:)
Network
test
temp
quest81
quest80
quest79
quest78
quest77
quest76
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quest3
quest2
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