

## 1. Storing a line in a text file

### Aim:

To write a program in C to create and store information in a text file.

### Code:

```
//to create and store information in a text file
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

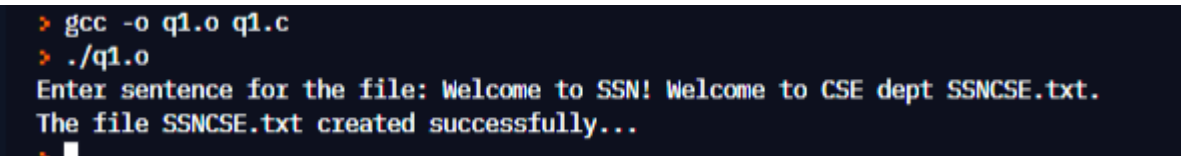
#define lim 100

int main(){
    char line[lim];
    FILE *f;
    f=fopen("SSNCSE.txt","w");
    if (f==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }
    printf("Enter sentence for the file: ");
    fgets(line,lim,stdin);
    fprintf(f,"%s",line);
    fclose(f);

    printf("The file SSNCSE.txt created successfully...\n");

    return 0;
}
```

### Output:



```
> gcc -o q1.o q1.c
> ./q1.o
Enter sentence for the file: Welcome to SSN! Welcome to CSE dept SSNCSE.txt.
The file SSNCSE.txt created successfully...
```

### Result:

A program for storing a line in a text file is written and executed.

## 2. Reading a line from a text file

### Aim:

To write a program that reads an existing file and prints its contents.

### Code:

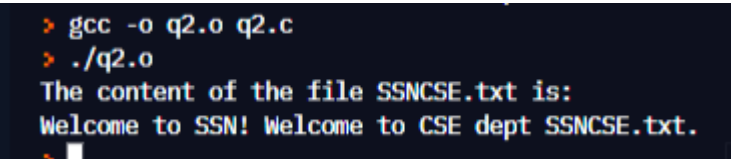
```
//to read from an existing file
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

#define lim 100

int main(){
    char line[lim];
    FILE *f;
    f=fopen("SSNCSE.txt","r");
    if (f==NULL){
        printf("Error! File not found.\n");
        exit(0);
    }
    fscanf(f,"%[^\n]",line);
    printf("The content of the file SSNCSE.txt is:\n%s\n",line);
    fclose(f);

    return 0;
}
```

### Output:



```
> gcc -o q2.o q2.c
> ./q2.o
The content of the file SSNCSE.txt is:
Welcome to SSN! Welcome to CSE dept SSNCSE.txt.
```

### Result:

A program for reading an existing file is written and executed.

### 3. Storing multiple lines in a file

**Aim:**

To write a program to write multiple lines in a text file.

**Code:**

```
//to create and store information in a text file
#include <stdio.h>
#include <stdlib.h>

#define lim 400

int main(){
    char line[lim]; int n;
    printf("Enter no. of lines to be entered in the file: ");
    scanf("%d",&n);
    FILE *f;
    f=fopen("SSNCSE.txt","w");
    if (f==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }
    for (int i=1; i<=n; i++){
        printf("Enter line for the file: ");
        scanf(" %[^\\n]", line);
        fprintf(f,"%s\\n",line);
    }
    fclose(f);

    f=fopen("SSNCSE.txt","r");
    if (f==NULL){
        printf("Error! File not found.\n");
        exit(0);
    }
    printf("The content of the file SSNCSE2.txt is:\\n");
    while (fgets(line,sizeof(line),f)!=NULL){
        printf("%s",line);
    }
    fclose(f);

    return 0;
}
```

**Output:**

```
> gcc -o q3.o q3.c
> ./q3.o
Enter no. of lines to be entered in the file: 3
Enter line for the file: Get to know SSN
Enter line for the file: SSN Institutions, established by Dr. Shiv Nadar, Founder Chairman of HCL Technologies, stands out as a premier center of higher learning with a mission of pursuing excellence in education and research.
Enter line for the file: The institutions are named after the Chairman's father, Sri Sivasubramaniya Nadar.
The content of the file SSNCSE2.txt is:
Get to know SSN
SSN Institutions, established by Dr. Shiv Nadar, Founder Chairman of HCL Technologies, stands out as a premier center of higher learning with a mission of pursuing excellence in education and research.
```

SSNCSE.txt

```
1 Get to know SSN
2 SSN Institutions, established by Dr. Shiv Nadar, Founder Chairman of HCL Technologies, stands out as a premier center of higher learning with a mission of pursuing excellence in education and research.
3 The institutions are named after the Chairman's father, Sri Sivasubramaniya Nadar.
4
```

**Result:**

A program for storing multiple line in a text file is written and executed.

## 4. Finding the number of lines

### Aim:

To write a program that finds the number of lines in a given text file.

### Code:

```
//to find the no. of lines in a text file
#include <stdio.h>
#include <stdlib.h>

#define lim 400

int main(){
    char s[lim], line[lim]; int n=0;
    printf("Enter the name of the file to be opened: ");
    scanf("%s",s);

    FILE *f;
    f=fopen(s,"r");

    if (f==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }

    while (fgets(line,sizeof(line),f)!=NULL){
        n++;
    }
    printf("\nNo. of lines: %d\n",n);

    fclose(f);

    return 0;
}
```

### Output:

```
> gcc -o q4.o q4.c
> ./q4.o
Enter the name of the file to be opened: SSNCSE.txt

No. of lines: 3
>
```

SSNCSE.txt

```
1 Get to know SSN
2 SSN Institutions, established by Dr. Shiv Nadar, Founder Chairman of HCL Technologies, stands out as a premier center of higher learning with a
  mission of pursuing excellence in education and research.
3 The institutions are named after the Chairman's father, Sri Sivasubramaniya Nadar.
4
```

## Result:

A program to find the number of lines in a given text file is written and executed.

## 5. Deleting a line

### Aim:

To write a program that deletes specific lines from a file.

### Code:

```
//to delete a specific line from a file
#include <stdio.h>
#include <stdlib.h>

#define lim 400

int main(){
    char s[lim], name[20], line[lim]; int n;
    printf("Enter the no. of lines to remove: ");
    scanf("%d",&n);

    printf("Enter name of file to be opened: ");
    scanf("%s",name);

    FILE *f1, *f2;

    for (int t=0; t<n; t++){
        f1=fopen(name,"r");
        f2=fopen("temp.txt","w");

        if (f1==NULL){
            printf("Error! File not created.\n");
            exit(0);
        }
        if (f2==NULL){
            printf("Error! File not created.\n");
            exit(0);
        }

        int l;
        printf("Enter line no. of the line to be removed: ");
        scanf("%d",&l);
        int i=1;
        while (fgets(line,sizeof(line),f1)!=NULL){
            if (i!=l){
                fputs(line,f2);
            }
            i++;
        }
        fclose(f1);
```

```
fclose(f2);

remove(name);
rename("temp.txt", name);

printf("Current line %d deleted from file.\n", l);
}

f1=fopen(name, "r");
printf("The contents of the file now is:\n");
while (fgets(line, sizeof(line), f1) != NULL){
    printf("%s", line);
}

return 0;
}
```

**Output:**

```
> gcc -o q5.o q5.c
> ./q5.o
Enter the no. of lines to remove: 2
Enter name of file to be opened: SSNCSE.txt
Enter line no. of the line to be removed: 2
Current line 2 deleted from file.
Enter line no. of the line to be removed: 2
Current line 2 deleted from file.
The contents of the file now is:
Get to know SSN
> 
```

```
SSNCSE.txt
1  Get to know SSN
2
```

**Result:**

A program to delete specific lines in a given text file is written and executed.



## 6. Counting words and characters

### Aim:

To write a program that finds the number of words and characters in a given text file.

### Code:

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

#define lim 100

int main(){
    char s[lim], line[lim], name[20], ch;

    printf("Enter name of file to be opened: ");
    scanf("%s",name);

    FILE *f;
    f=fopen(name,"r");

    if (f==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }

    int ctrw=0, ctrch=0;
    while ((ch=fgetc(f))!=EOF){
        ctrch++;
        if (ch==' ' || ch=='\t' || ch=='\n' || ch=='\0'){
            ctrw++;
        }
    }
    fclose(f);

    printf("No. of characters in file: %d\n",ctrch-1);
    printf("No. of words in file: %d\n",ctrw);

    return 0;
}
```

**Output:**

```
> gcc -o q6.o q6.c
> ./q6.o
Enter name of file to be opened: SSNCSE.txt
No. of characters in file: 15
No. of words in file: 4
> |
```

**Result:**

A program to find the number of words and characters in a given text file is written and executed.

## 7. Copying a file

### Aim:

To write a program that copies the contents of a text file in another name.

### Code:

```
//to copy a file in another name
#include <stdio.h>
#include <stdlib.h>

#define lim 100

int main(){
    char s[lim], name[20], newname[20], line[lim];

    printf("Enter name of file to be opened: ");
    scanf("%s",name);
    printf("Enter new name of file for contents to be copied in: ");
    scanf("%s",newname);

    FILE *f1,*f2;
    f1=fopen(name,"r");
    f2=fopen(newname,"w");

    if (f1==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }
    if (f2==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }

    while (fgets(line,sizeof(line),f1)!=NULL){
        fputs(line,f2);
    }

    fclose(f1);
    fclose(f2);

    printf("File contents copied successfully...\n");

    return 0;
}
```

**Output:**

```
> gcc -o q7.o q7.c
> ./q7.o
Enter name of file to be opened: SSNCSE.txt
Enter new name of file for contents to be copied in: SSNCSE2.txt
File contents copied successfully...
> |
```

SSNCSE2.txt

```
1 |Get to know SSN
2 |
```

**Result:**

A program to copy the contents of a text file is written and executed.

## 8. Appending lines to a file

### Aim:

To write a program that appends text to an existing text file.

### Code:

```
//to append multiple lines at the end of a text file
#include <stdio.h>
#include <stdlib.h>

#define lim 300

int main(){
    char s[lim], name[20], line[lim]; int n;

    printf("Enter name of file in which to append: ");
    scanf("%s",name);
    printf("Enter the no. of lines to append: ");
    scanf("%d",&n);

    FILE *f;
    f=fopen(name,"a");

    if (f==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }

    for (int i=0; i<n; i++){
        printf("Enter line: ");
        scanf(" %[^\n]",line);
        fputs(line,f);
    }

    fclose(f);

    return 0;
}
```

**Output:**

```
> gcc -o q8.o q8.c
> ./q8.o
Enter name of file in which to append: SSNCSE.txt
Enter the no. of lines to append: 1
Enter line: It is a great college!
```

SSNCSE.txt

```
1  Get to know SSN
2  It is a great college!
```

**Result:**

A program to append lines to an existing text file is written and executed.

## 9. Replacing a line

### Aim:

To write a program that replaces a specific line with other new text in a file.

### Code:

```
//to replace a specific line with another text in a file
#include <stdio.h>
#include <stdlib.h>

#define lim 100

int main(){
    char s[lim], name[20], line[lim]; int n;
    printf("Enter name of file in which to replace text: ");
    scanf("%s",name);
    printf("Enter the no. of the line to replace: ");
    scanf("%d",&n);

    FILE *f1, *f2;
    f1=fopen(name,"r");
    f2=fopen("temp.txt","w");

    if (f1==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }
    if (f2==NULL){
        printf("Error! File not created.\n");
        exit(0);
    }

    int i=1;
    while (fgets(line,sizeof(line),f1)!=NULL){
        if (i==n){
            printf("Enter new line: ");
            scanf(" %[^\n]",line);
            fputs(line,f2);
        }
        else{
            fputs(line,f2);
        }
        i++;
    }
}
```

```
fclose(f1);  
fclose(f2);  
  
remove(name);  
rename("temp.txt",name);  
  
return 0;  
}
```

**Output:**

```
> gcc -o q9.o q9.c  
> ./q9.o  
Enter name of file in which to replace text: SSNCSE.txt  
Enter the no. of the line to replace: 1  
Enter new line: Getting to know SSN  
>
```

```
SSNCSE.txt  
1  Getting to know SSN
```

**Result:**

A program to replace a given line with another in a given text file is written and executed.