INTRODUCTION TO COMPUTER SCIENCE - CSL1010

TEXT EDITOR

Team Members-

- **Nitin verma (B23EE1048)**
- **Agastya Singh (B23CI1201)**
- **Kukatlapalli William Samuel (B23CS1028)**

WHAT IS THIS PROJECT ALL ABOUT ?

In this project, we aimed to make a text editor based program using the C programming language. This project was an opportunity for us to learn C programming language in a practical way and improve our understanding of the subject. It made us look for various other reference materials, mainly from the Internet , introducing us to various aspects and domains in which C programming language can be applied.

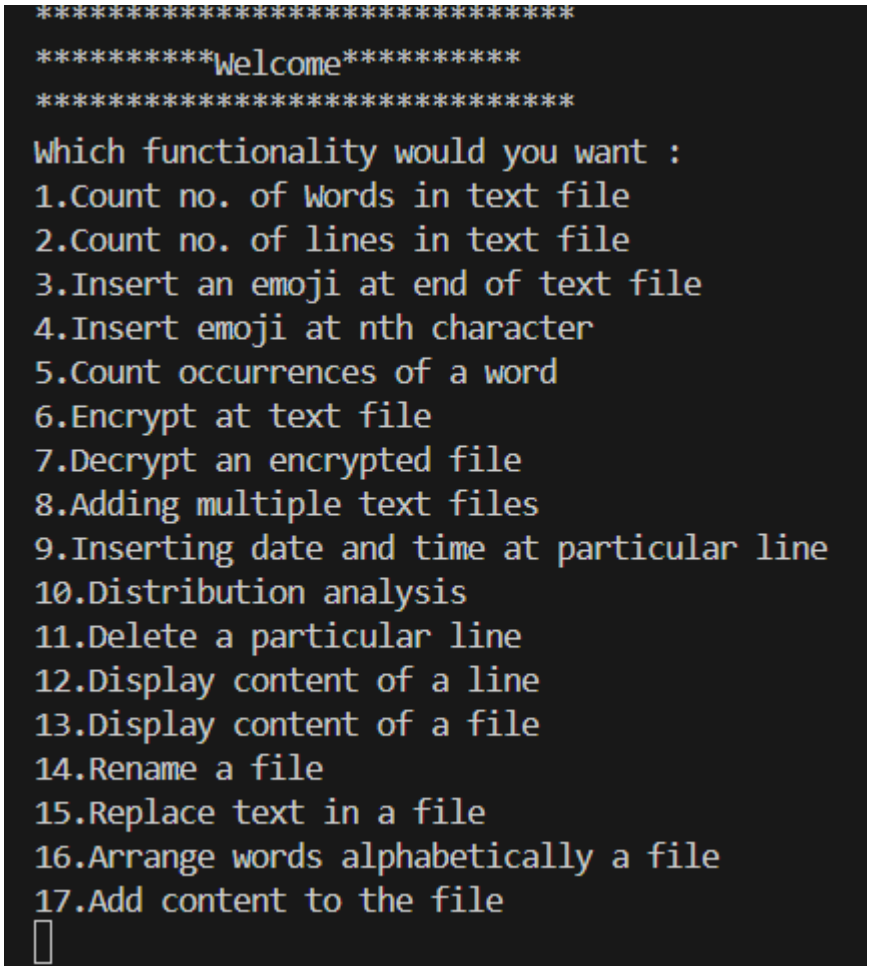
Creating this project required us to have knowledge about following concepts of c programming language:

1. Basic declaration and initialization of variables,
2. If else and switch statements,
3. For loop and while loops,
4. Functions and recursion,
5. Pointers,
6. Arrays,
7. Strings and string functions,
8. File handling,
9. Dynamic memory allocation,
10. Various header files and their needs.

BASICALLY WE GIVE THE USER THE CHOICE TO SELECT ANY ONE FUNCTIONALITY. BASED ON USER INPUT WE PROCEED TO PROCESS MORE INFORMATION AND DO THE TASK.

The Working of Program is shown with pictures below.

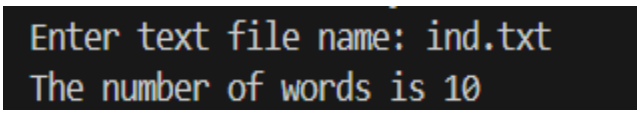
Starting of the program: User decision



A Brief description of each Task:

1. Count no. of Words in a text file :

When user enters file name, It shows no .of Words present in that particular file.



2. Count no. of Lines in a text file :

When user enters file name, It shows the no. of lines present in that particular file.

```
Enter text file name: ind.txt
The number of lines is 8
```

3. Inserting an emoji at the end of a text file:

User enter file name>> chooses which emoji to insert>>emoji gets inserted at the end.

Sample file for : 3,4,5,6,9,11,14,15

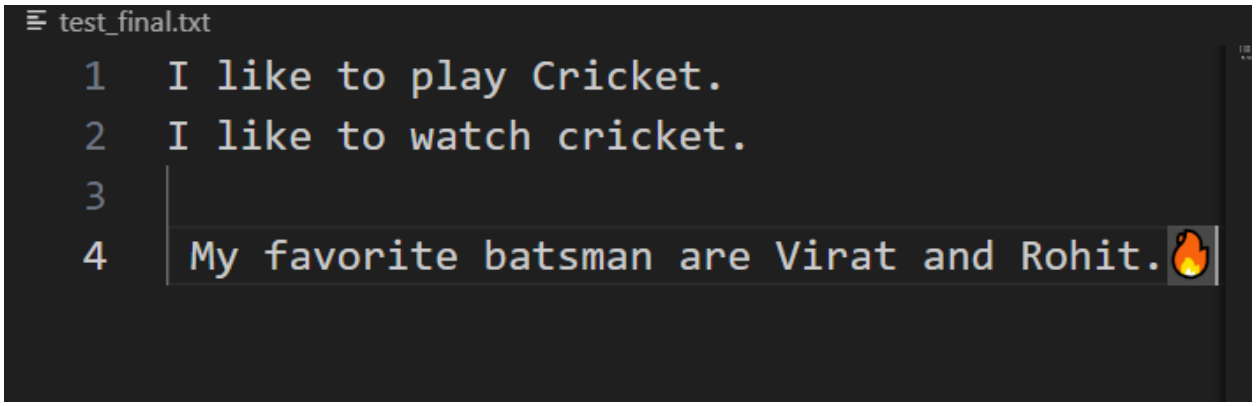
test_final.txt

```
1  I like to play Cricket.
2  I like to watch cricket.
3
4  My favorite batsman are Virat and Rohit.
```

Process:

```
3
Enter the name of the text file: test_final.txt
Choose an emoji to insert:
1. Thumbs up
2. Heart
3. Smiley face
4. Snowman
5. Fire
6. Rocket
7. Unicorn
8. Rainbow
Enter your choice: 5
Emoji inserted successfully.
```

Result:



4. Inserting an emoji at nth character a text file:

User enters filename>> decide after which character>> choose emoji

Process:

```
4
Enter the name of the text file: test_final.txt
Enter the position of the character to insert the emoji after: 14
Choose an emoji to insert:
1. Thumbs up
2. Heart
3. Smiley face
4. Smiling face with sunglasses
5. Crying face
6. Angry face
7. Smiling face with open mouth and smiling eyes
8. Smiling face with heart-eyes
Enter your choice: 1
Emoji inserted successfully after the 14th character.
```

Output :

test_final.txt

```
I like to play👍 Cricket.
I like to watch cricket.

My favorite batsman are Virat and Rohit.
```

5. Count Occurrences of a given word:

```
5
Enter the name of the text file: test_final.txt
Enter the word to count occurrences: is
The word "is" does not exist in the file.
```

```
5
Enter the name of the text file: test_final.txt
Enter the word to count occurrences: like
The word "like" occurs 2 time(s) in the file.
```

6. Encrypt a text file :

```
6
Enter the name of the input file: test_final.txt
File encrypted successfully.
```

encrypted.txt

```
L#olnh#wr#sodb#Fulfnhw1
L#olnh#wr#zdwfk#fulfnhw1

#Pb#idyrulwh#edwvpdq#duh#Yludw#dqg#Urklw1
```

7. Decrypting the encrypted file:

```
7
Enter the name of the input file: encrypted.txt
File decrypted successfully.
```

decrypted.txt

```
I like to play Cricket.
I like to watch cricket.

My favorite batsman are Virat and Rohit.
```

8. Adding multiple .txt files together:

```
8
Enter the number of files to add: 3
Enter the name of file 1: ind.txt
Enter the name of file 2: ju.txt
Enter the name of file 3: ee.txt
Enter the name of the output file: final.txt
Files added successfully.
```

ind.txt

```
I live in india.
```

ju.txt

```
I study in IIT jodhpur.
```

ee.txt

```
I am student of electrical engineering department.
   ...
```

final.txt

```
I live in india.

 I study in IIT jodhpur.  I am student of electrical engineering department.
  ...
```

9. Inserting Date and time in particular line:

```
9
Enter the name of the input file: test_final.txt
Enter the line number to insert the date and time: 2
Date and time inserted at line 2.
```

test_final.txt

```
I like to play Cricket.
 Sat Apr 20 18:58:18 2024
I like to watch cricket.

My favorite batsman are Virat and Rohit.
```

10. Distribution Analysis:

num.txt

```
34,56,98,23,0,1,90,78,20
```

```
10
Enter the name of the input file: num.txt
Calculations appended to the file successfully.
```

num.txt

```
34,56,98,23,0,1,90,78,20
Sum: 400
Mean: 44.444
Median: 34
Standard Deviation: 35.327
Variance: 1248.025
Ascending order:
0,1,20,23,34,56,78,90,98
Descending order:
98,90,78,56,34,23,20,1,0
```

11 . Delete a particular line:

```
11
Enter the name of the file: test_final.txt
Enter the line number you want to delete: 3
Line 3 deleted successfully.
```

test_final.txt

```
I like to play Cricket.
I like to watch cricket.
 My favorite batsman are Virat and Rohit.
```

12 . Display content of a line:

```
12
Enter the name of the file: test_final.txt
Enter the line number you want to display: 4
Content of line 4:
 My favorite batsman are Virat and Rohit.
```

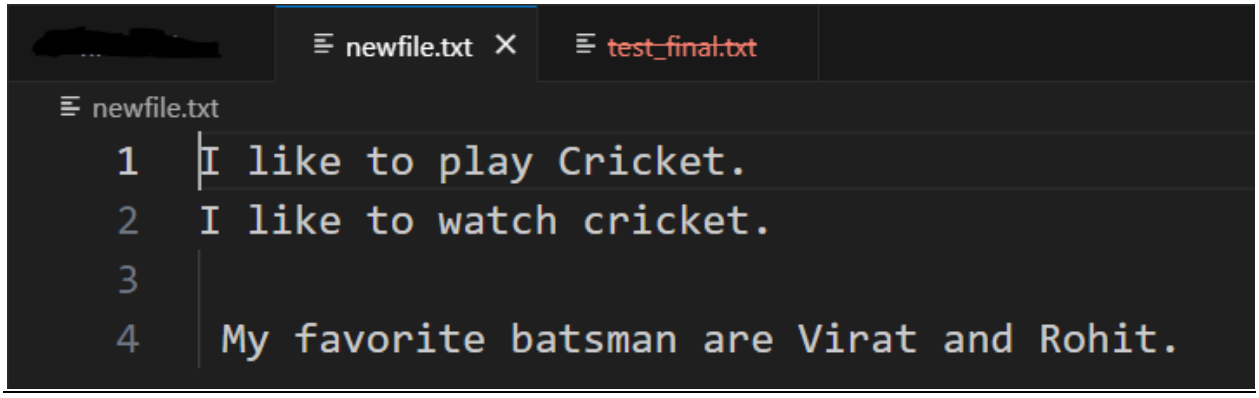
13. Display content of a file :

```
13
Enter the name of the file: test_final.txt
I like to play Cricket.
I like to watch cricket.

 My favorite batsman are Virat and Rohit.
```

14. Rename a File:

```
14
Enter the current name of the file: test_final.txt
Enter the new name of the file: newfile.txt
File renamed successfully from test_final.txt to newfile.txt.
```



15. Replace text in a file:

```
15
Enter the name of the file: test_final.txt
Enter the text you want to replace: batsman
Enter the replacement text: Cricketer
Text replaced successfully.
```

test_final.txt

```
1  I like to play Cricket.
2  I like to watch cricket.
3
4  My favorite Cricketer are Virat and Rohit.
```

16. Alphabetical Order:

alphabet.txt

```
1  nitin rohit virat vivek nitesh manish manisha
```

```
16
Enter the name of the file: alphabet.txt
Words arranged alphabetically in the file.
```

alphabet.txt

```
manish
manisha
nitesh
nitin
rohit
virat
vivek
```

17. Add contents into file:

```
17
Enter the filename: txt_final..txt
Enter content to append: But Mahi is greatest
finisher
Content appended successfully.PS C:\Users\pc\.
```

test_final.txt

```
I like to play Cricket.
I like to watch cricket.

My favorite batsman are Virat and Rohit.But Mahi is greatest finisher.
```

Contribution of Team members

- Kukatlapalli William Samuel (B23CS1028)
  - 15. Replace text in .txt file.
  - 2. Count no. of lines in .txt file.
  - 17.Append content into the file.
- Agastya Singh (B23CI1201)
  - 14. Rename a File.
  - 11. Delete a particular line.
  - 12. Display content of a line.
  - 13. Display content of a file.
- Nitin Verma (B23EE1048)
  - 1.Count Words in a file,
  - 3.Insert an emoji at end of text file,
  - 4. Insert emoji at nth character,
  - 5.Count occurrences of a word,
  - 6.Encrypt at text file,
  - 7.Decrypt an encrypted file,
  - 8.Adding multiple text files,
  - 9.Inserting date and time at particular line,
  - 10.Distribution analysis, and
  - 16.Arrange words alphabetically in a file

“We express our gratitude towards all the faculty members and teaching assistant for their support without which making this project would have been difficult for us.”

THANK YOU