

# PROJECT REPORT

## TEXT EDITOR

### OBJECTIVE OF THE PROJECT:

- To create text editor that has basic editing options like , open, save, write, undo, redo.

### AVAILABLE FUNCTIONALITIES:

1. createtextEditor : used to create a file.
2. Open : used to open a file.
3. Save : used to save the created file.
4. Write : used to write in the created file.
5. Undo : used to remove the last character.
6. Redo : used to redo the last removed character.
7. Clear : used to clear all the data in the file.
8. Print : used to display all the text in the file.

### DATASTRUCTURES USED:

- Doubly Linked List.
- Stacks (only for undo and Redo Functions).

### IMPLEMENTATION DETAILS:

## 1. CREATING A NEW FILE:

- This function in the file is used to create a new file.
- In this function first we allocate memory. • And then initialize the head and current pointers with NULL.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 1
File has been created

Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: |
```

## 2. OPENING A FILE:

- The written code opens the file in read mode using fopen.
- If the file pointer is empty then it prints EMPTY.
- If it is pointing to a filename, then it reads all the text given by the user and then it is closed using fclose.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 2
Enter the filename to open: cse-s_group7_project.txt
File opened successfully
```

### 3. SAVING A CREATED FILE:

- After opening the file in write mode, if the file is NULL, then we cannot save it.
- Else the content given in the editor will be saved in the file.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 3
Enter the filename to save: cse-s_group7_project.txt
File saved successfully.
```

### 4. WRITING A SENTENCE:

- Input is given by the user.
- Using insert function we can write a sentence.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 4
Enter the sentence: Group 7 has written a code for a text editor.
```

## 5. UNDO:

In this code we have used two stacks to implement these functions.

- While inserting the characters into the file, they are getting stored in undo stack.
- If undo stack is empty, it prints EMPTY.
- Else the top character in the undo stack is popped out and then pushed into redo stack. Hence element is removed. If no text is present in file,

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 5
Empty!
Undo performed
```

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 5
Undo performed

Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 8
Group 7 has written a code for a text edito
```

## 6. REDO:

- Now redo can be performed and deleted elements can be printed.
- Else Redo is not possible.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 6
Redo performed

Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 8
Group 7 has written a code for a text editor
```

## 7. CLEAR:

- This function is used to clear all the text stored in the file.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 7
Content cleared

Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 8
File is empty!
```

## 8. PRINTING THE DATA:

- This function is used to print all the data given as input in the user.

Output:

```
Text Editor Menu:
1. Create a new file
2. Open a file
3. Save to file
4. Write a sentence
5. Undo
6. Redo
7. Clear the content
8. Print the text in editor
0. Exit
Enter choice: 8
Group 7 has written a code for a text editor
```

## **CONCLUSION REMARKS AND SCOPE FOR FUTURE WORK:**

- Multiple redo functions can be done.