

Assignment 1

Програма реалізована і працює за принципом збереження всього, що вводиться в “технічний” файл, про який користувачу не повідомляється. Символи зберігаються по одному через `getchar()`, тому **обмежень в розмірі вводу немає**.

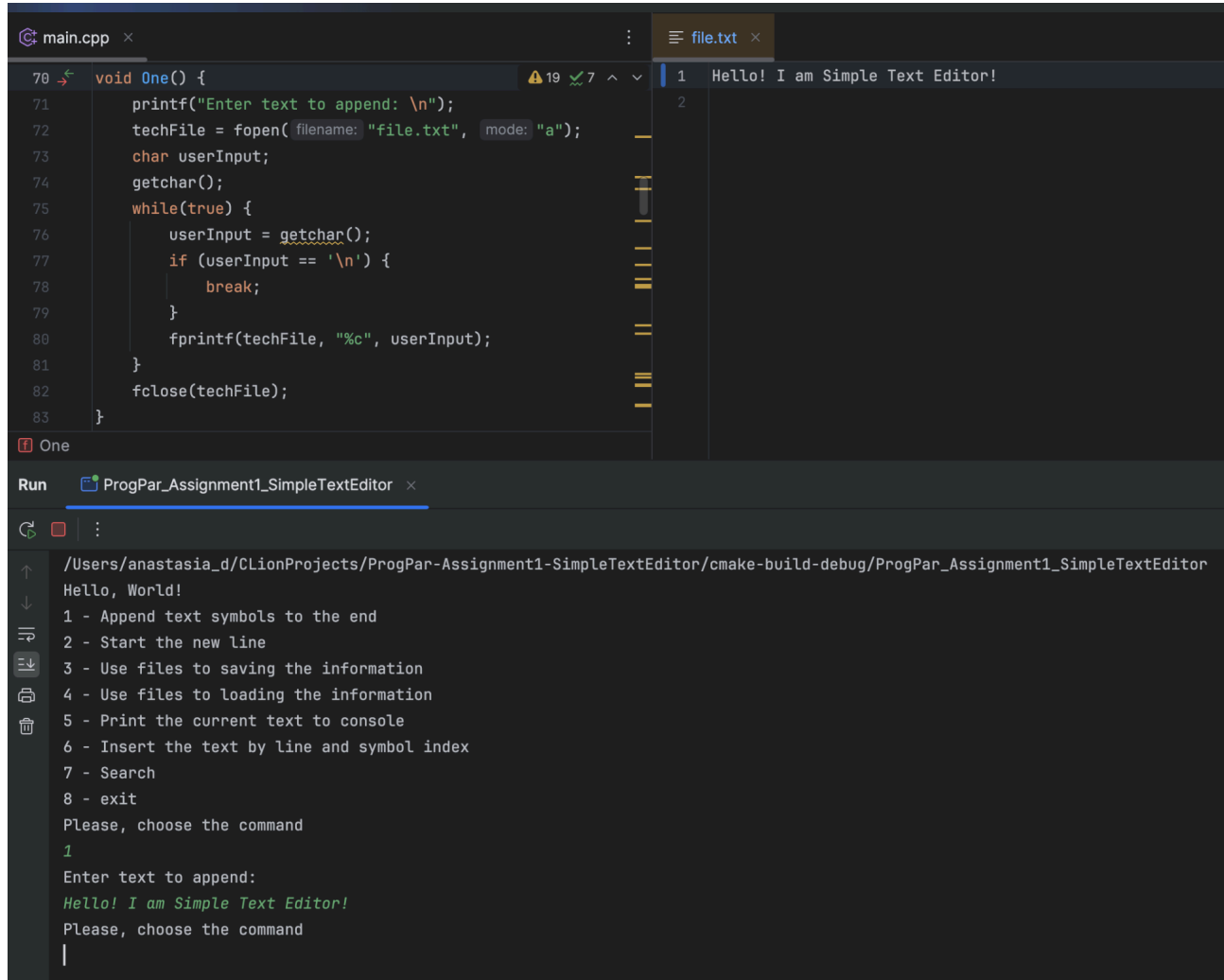
При виборі команди вводити можна тільки числа (якщо текст - все ламається).

Тест 1

План тестування 1:

- 1 append
- 2 new line
- 3 append
- 4 print
- 5 save
- 6 load
- 7 print
- 8 save

1. Згорі ліворуч ви можете побачити функцію One, яка відповідає за реалізацію команди 1. Праворуч - “технічний” файл, про який користувачу не повідомляється.



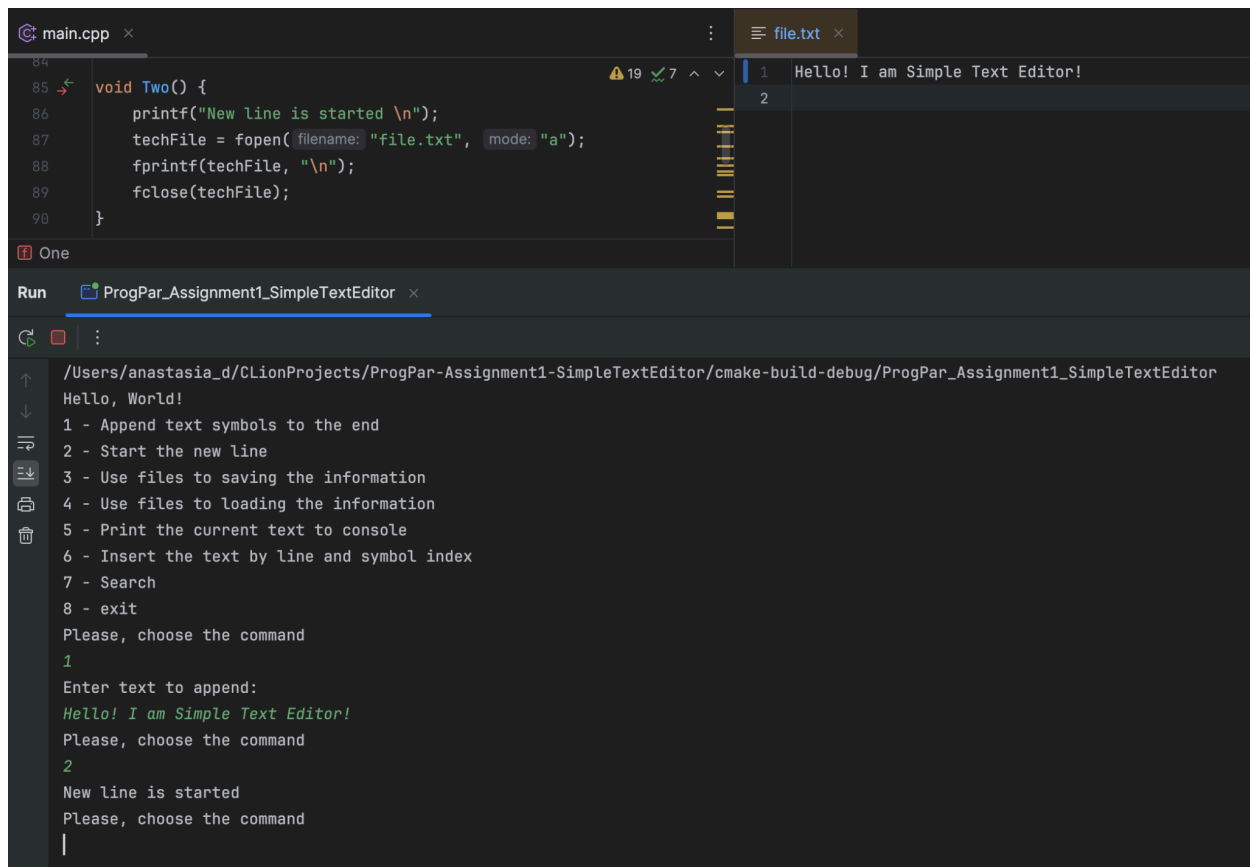
The screenshot shows a C++ IDE with two main panels. The top panel is a file editor with two tabs: 'main.cpp' and 'file.txt'. The 'main.cpp' tab is active, showing a C++ function 'void One()' that implements the '1' command. The function prints 'Enter text to append: \n', opens 'file.txt' in append mode, reads user input until a newline character, and appends it to the file. The 'file.txt' tab shows the text 'Hello! I am Simple Text Editor!'. The bottom panel is a terminal window titled 'Run ProgPar_Assignment1_SimpleTextEditor'. It displays the program's output, including a menu of commands (1-8) and the execution of command '1', which results in the text 'Hello! I am Simple Text Editor!' being printed to the console.

```
70 void One() {
71     printf("Enter text to append: \n");
72     techFile = fopen( filename: "file.txt", mode: "a");
73     char userInput;
74     getchar();
75     while(true) {
76         userInput = getchar();
77         if (userInput == '\n') {
78             break;
79         }
80         fprintf(techFile, "%c", userInput);
81     }
82     fclose(techFile);
83 }
```

```
1 Hello! I am Simple Text Editor!
2
```

```
Run ProgPar_Assignment1_SimpleTextEditor
/Users/anastasia_d/CLionProjects/ProgPar-Assignment1-SimpleTextEditor/cmake-build-debug/ProgPar_Assignment1_SimpleTextEditor
Hello, World!
1 - Append text symbols to the end
2 - Start the new line
3 - Use files to saving the information
4 - Use files to loading the information
5 - Print the current text to console
6 - Insert the text by line and symbol index
7 - Search
8 - exit
Please, choose the command
1
Enter text to append:
Hello! I am Simple Text Editor!
Please, choose the command
|
```

2.



The screenshot shows a C++ IDE with three main components: a code editor, a file explorer, and a console window.

Code Editor: The file `main.cpp` is open. It contains a function `Two()` that prints a message and appends it to a file named `file.txt`.

```
84  
85 void Two() {  
86     printf("New line is started \n");  
87     techFile = fopen( filename: "file.txt", mode: "a");  
88     fprintf(techFile, "\n");  
89     fclose(techFile);  
90 }
```

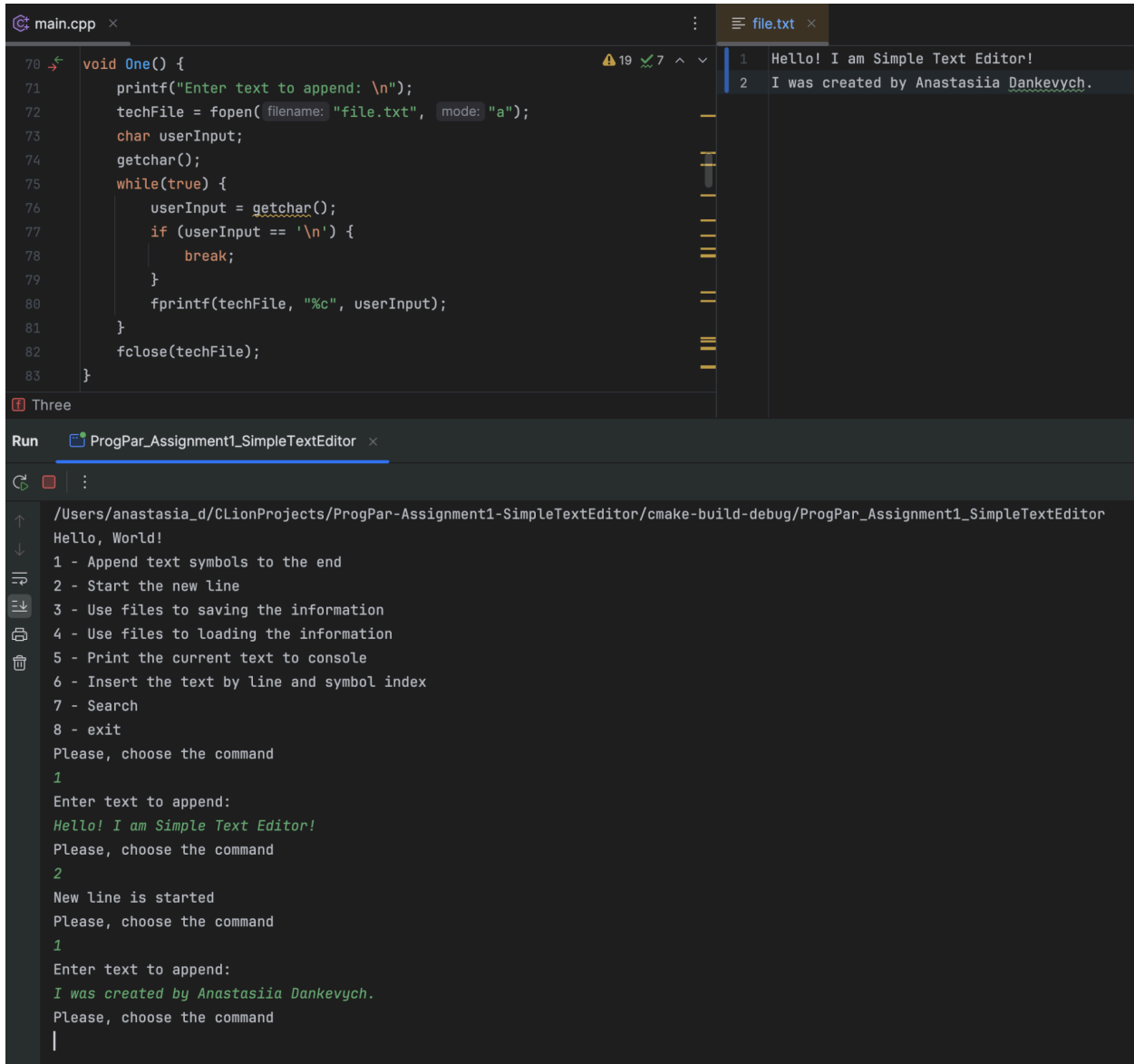
File Explorer: The file `file.txt` is open, showing two lines of text:

```
1 Hello! I am Simple Text Editor!  
2
```

Console Window: The console shows the output of the program, including the path to the executable, the initial "Hello, World!" message, a list of commands, and the results of executing commands 1 and 2.

```
/Users/anastasia_d/CLionProjects/ProgPar-Assignment1-SimpleTextEditor/cmake-build-debug/ProgPar_Assignment1_SimpleTextEditor  
Hello, World!  
1 - Append text symbols to the end  
2 - Start the new line  
3 - Use files to saving the information  
4 - Use files to loading the information  
5 - Print the current text to console  
6 - Insert the text by line and symbol index  
7 - Search  
8 - exit  
Please, choose the command  
1  
Enter text to append:  
Hello! I am Simple Text Editor!  
Please, choose the command  
2  
New line is started  
Please, choose the command  
|
```

3.



```
main.cpp x
70 void One() {
71     printf("Enter text to append: \n");
72     techFile = fopen( filename: "file.txt", mode: "a");
73     char userInput;
74     getchar();
75     while(true) {
76         userInput = getchar();
77         if (userInput == '\n') {
78             break;
79         }
80         fprintf(techFile, "%c", userInput);
81     }
82     fclose(techFile);
83 }
```

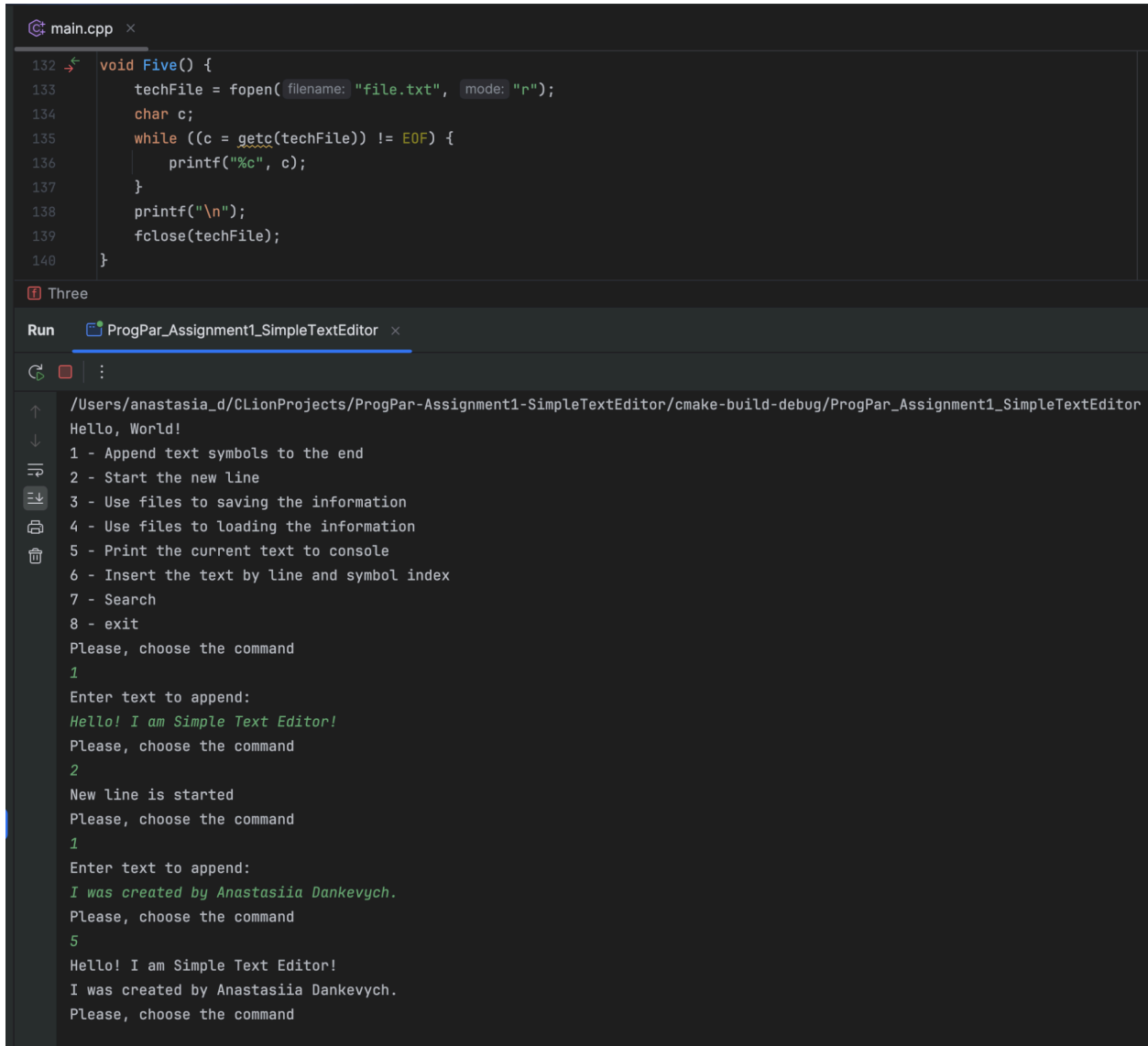
```
file.txt x
1 Hello! I am Simple Text Editor!
2 I was created by Anastasiia Dankevych.
```

Three

Run ProgPar_Assignment1_SimpleTextEditor x

```
/Users/anastasia_d/CLionProjects/ProgPar-Assignment1-SimpleTextEditor/cmake-build-debug/ProgPar_Assignment1_SimpleTextEditor
Hello, World!
1 - Append text symbols to the end
2 - Start the new line
3 - Use files to saving the information
4 - Use files to loading the information
5 - Print the current text to console
6 - Insert the text by line and symbol index
7 - Search
8 - exit
Please, choose the command
1
Enter text to append:
Hello! I am Simple Text Editor!
Please, choose the command
2
New line is started
Please, choose the command
1
Enter text to append:
I was created by Anastasiia Dankevych.
Please, choose the command
|
```

4.



The screenshot shows a C++ IDE with two main panels. The top panel is a code editor for `main.cpp`, displaying a function `Five()` that opens a file named `file.txt` in read mode, reads its contents character by character using `getc`, and prints them to the console. The bottom panel is a terminal window titled `Run ProgPar_Assignment1_SimpleTextEditor`. It shows the program's output, which includes a list of commands (1-8) and a prompt for the user to choose a command. The user has entered `1`, and the program has prompted for text to append. The user has entered `Hello! I am Simple Text Editor!`, and the program has printed it. The user has then entered `2`, and the program has printed `New line is started`. The user has then entered `1` again, and the program has prompted for text to append. The user has entered `I was created by Anastasiia Dankevych.`, and the program has printed it. The user has then entered `5`, and the program has printed `Hello! I am Simple Text Editor!` and `I was created by Anastasiia Dankevych.`.

```
132 void Five() {
133     techFile = fopen(filename: "file.txt", mode: "r");
134     char c;
135     while ((c = getc(techFile)) != EOF) {
136         printf("%c", c);
137     }
138     printf("\n");
139     fclose(techFile);
140 }
```

Three

Run ProgPar_Assignment1_SimpleTextEditor

/Users/anastasia_d/ClionProjects/ProgPar-Assignment1-SimpleTextEditor/cmake-build-debug/ProgPar_Assignment1_SimpleTextEditor

Hello, World!

1 - Append text symbols to the end
2 - Start the new line
3 - Use files to saving the information
4 - Use files to loading the information
5 - Print the current text to console
6 - Insert the text by line and symbol index
7 - Search
8 - exit

Please, choose the command

1

Enter text to append:

Hello! I am Simple Text Editor!

Please, choose the command

2

New line is started

Please, choose the command

1

Enter text to append:

I was created by Anastasiia Dankevych.

Please, choose the command

5

Hello! I am Simple Text Editor!

I was created by Anastasiia Dankevych.

Please, choose the command

5.

The image shows a C++ IDE with two main panels. The top panel displays the source code for `main.cpp`, and the bottom panel shows the program's execution output.

Source Code (main.cpp):

```
92 void Three() {
93     printf("Enter the file name for saving (not more 20 symbols): \n");
94     char filePath[21];
95     scanf("%20s", filePath);
96
97     savingFile = fopen( filename: filePath, mode: "a");
98     techFile = fopen( filename: "file.txt", mode: "r");
99     char symbol;
100    while (true) {
101        symbol = fgetc(techFile);
102        if (symbol == EOF) {
103            break;
104        }
105        fputc(symbol, savingFile);
106    }
107    fclose(savingFile);
108    fclose(techFile);
109
110    techFile = fopen( filename: "file.txt", mode: "w"); // просто очистити файл
111    fclose(techFile);
112 }
```

Execution Output (Run):

```
Please, choose the command
2
New line is started
Please, choose the command
1
Enter text to append:
I was created by Anastasiia Dankevych.
Please, choose the command
5
Hello! I am Simple Text Editor!
I was created by Anastasiia Dankevych.
Please, choose the command
3
Enter the file name for saving (not more 20 symbols):
MyFileForSaving.txt
Please, choose the command
```

The output shows the program's interaction with the user. It prompts for a command, appends text to a file, prints a message, and then prompts for a file name to save to. The file name `MyFileForSaving.txt` is entered.

6.

main.cpp x

MyFileForSaving.txt

MyFileLoading.txt x

114 void Four() {
115 printf("Enter the file name for loading: \n");
116 char filePath[21];
117 scanf("%20s", filePath);
118 techFile = fopen(filename: "file.txt", mode: "a");
119 loadingFile = fopen(filename: filePath, mode: "r");
120 char symbol;
121 while (true) {
122 symbol = fgetc(loadingFile);
123 if (symbol == EOF) {
124 break;
125 }
126 fputc(symbol, techFile);
127 }
128 fclose(loadingFile);
129 fclose(techFile);
130 }

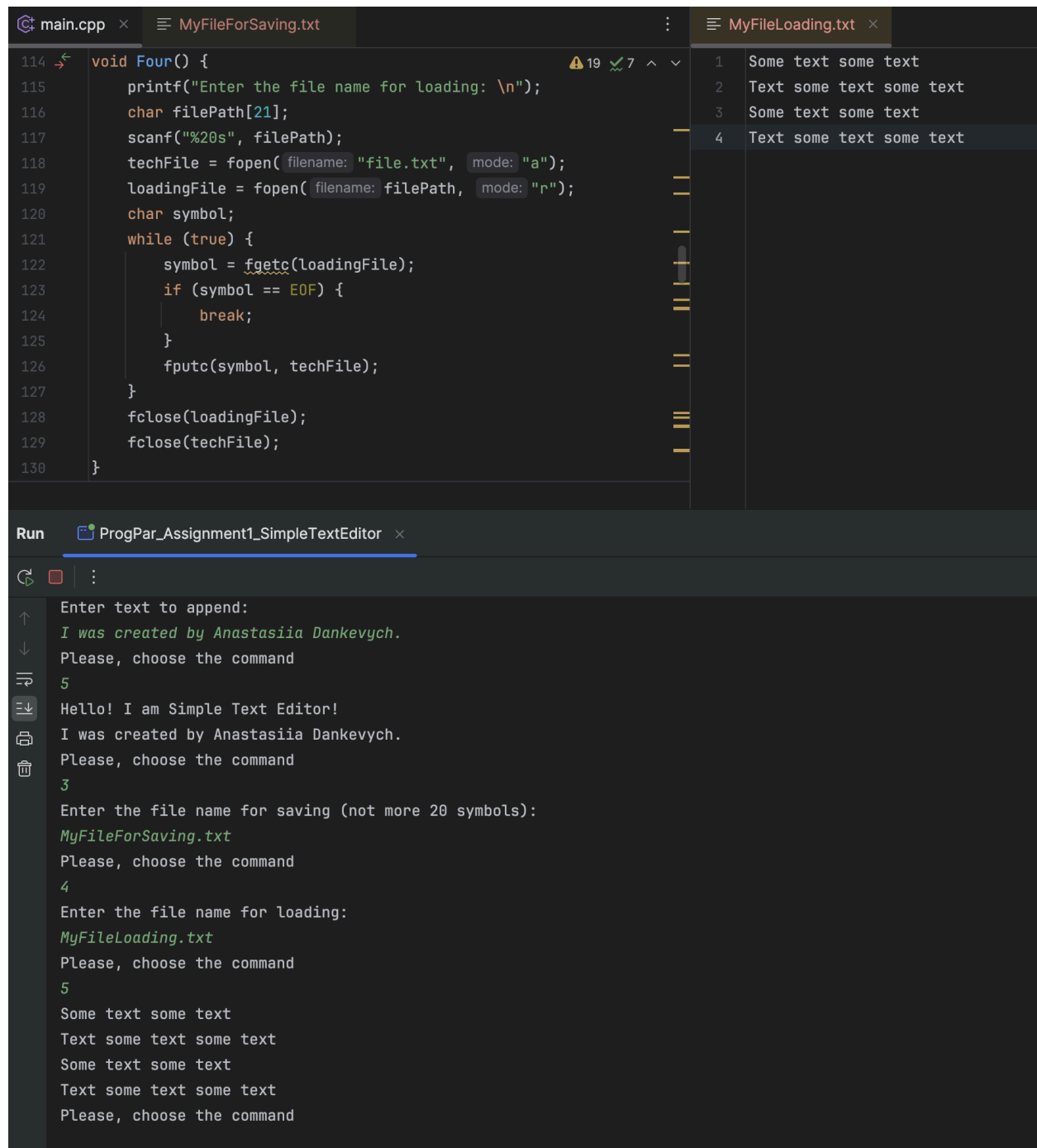
1 Some text some text
2 Text some text some text
3 Some text some text
4 Text some text some text

Run ProgPar_Assignment1_SimpleTextEditor x

↑
↓
≡
≡
≡
≡

Hello! I am Simple Text Editor!
Please, choose the command
2
New line is started
Please, choose the command
1
Enter text to append:
I was created by Anastasiia Dankevych.
Please, choose the command
5
Hello! I am Simple Text Editor!
I was created by Anastasiia Dankevych.
Please, choose the command
3
Enter the file name for saving (not more 20 symbols):
MyFileForSaving.txt
Please, choose the command
4
Enter the file name for loading:
MyFileLoading.txt
Please, choose the command
1

7.



```
114 void Four() {
115     printf("Enter the file name for loading: \n");
116     char filePath[21];
117     scanf("%20s", filePath);
118     techFile = fopen("file.txt", "a");
119     loadingFile = fopen(filePath, "r");
120     char symbol;
121     while (true) {
122         symbol = fgetc(loadingFile);
123         if (symbol == EOF) {
124             break;
125         }
126         fputc(symbol, techFile);
127     }
128     fclose(loadingFile);
129     fclose(techFile);
130 }
```

1 Some text some text
2 Text some text some text
3 Some text some text
4 Text some text some text

Run ProgPar_Assignment1_SimpleTextEditor

Enter text to append:
I was created by Anastasiia Dankevych.
Please, choose the command
5
Hello! I am Simple Text Editor!
I was created by Anastasiia Dankevych.
Please, choose the command
3
Enter the file name for saving (not more 20 symbols):
MyFileForSaving.txt
Please, choose the command
4
Enter the file name for loading:
MyFileLoading.txt
Please, choose the command
5
Some text some text
Text some text some text
Some text some text
Text some text some text
Please, choose the command

8.

The screenshot displays a C++ IDE with two main components: a source code editor and a terminal window.

Source Code Editor:

- File:** `main.cpp`
- Code:**

```
114 void Four() {  
115     printf("Enter the file name for loading: \n");  
116     char filePath[21];  
117     scanf("%20s", filePath);  
118     techFile = fopen("file.txt", "a");  
119     loadingFile = fopen(filePath, "r");  
120     char symbol;  
121     while (true) {  
122         symbol = fgetc(loadingFile);  
123         if (symbol == EOF) {  
124             break;  
125         }  
126         fputc(symbol, techFile);  
127     }  
128     fclose(loadingFile);  
129     fclose(techFile);  
130 }
```

Terminal Window:

- Tab:** `ProgPar_Assignment1_SimpleTextEditor`
- Output:**

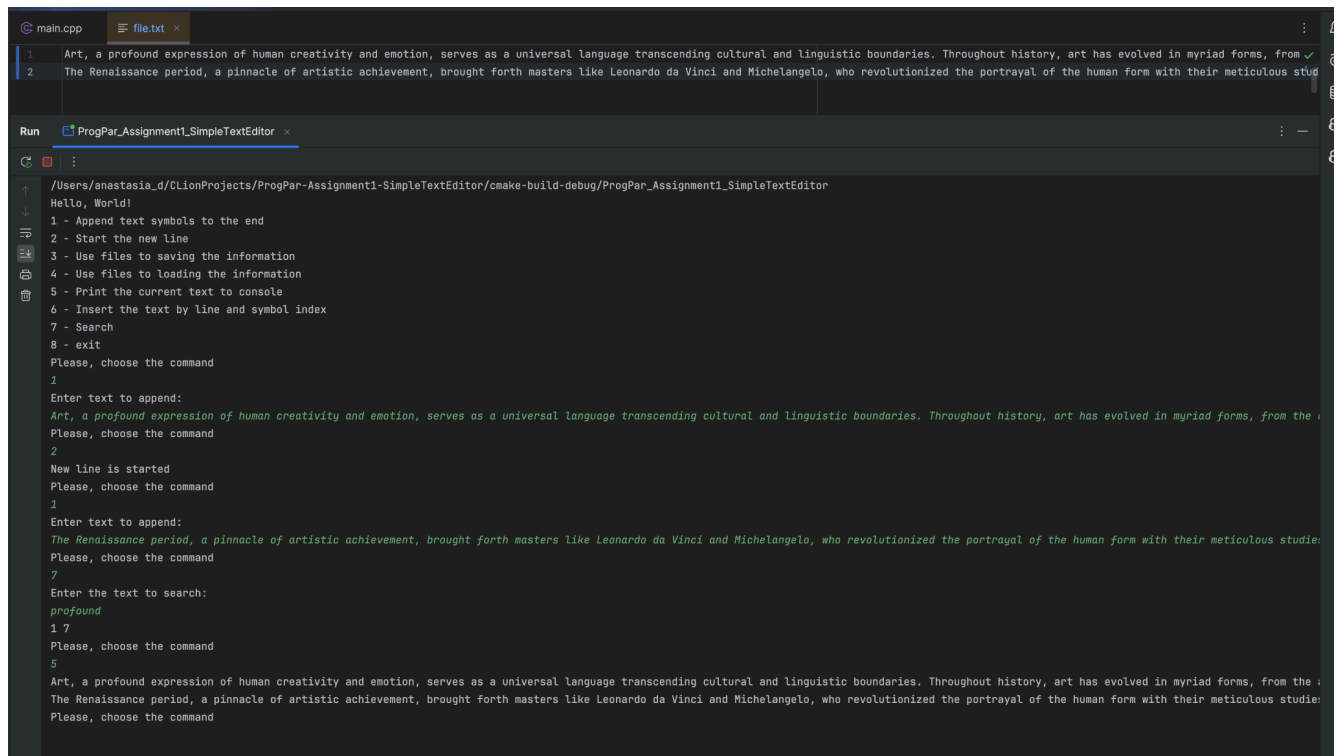
```
Hello! I am Simple Text Editor!  
I was created by Anastasiia Dankevych.  
Please, choose the command  
3  
Enter the file name for saving (not more 20 symbols):  
MyFileForSaving.txt  
Please, choose the command  
4  
Enter the file name for loading:  
MyFileLoading.txt  
Please, choose the command  
5  
Some text some text  
Text some text some text  
Some text some text  
Text some text some text  
Please, choose the command  
3  
Enter the file name for saving (not more 20 symbols):  
MySecondSave.txt  
Please, choose the command
```

Тест 2

План тестування 2:

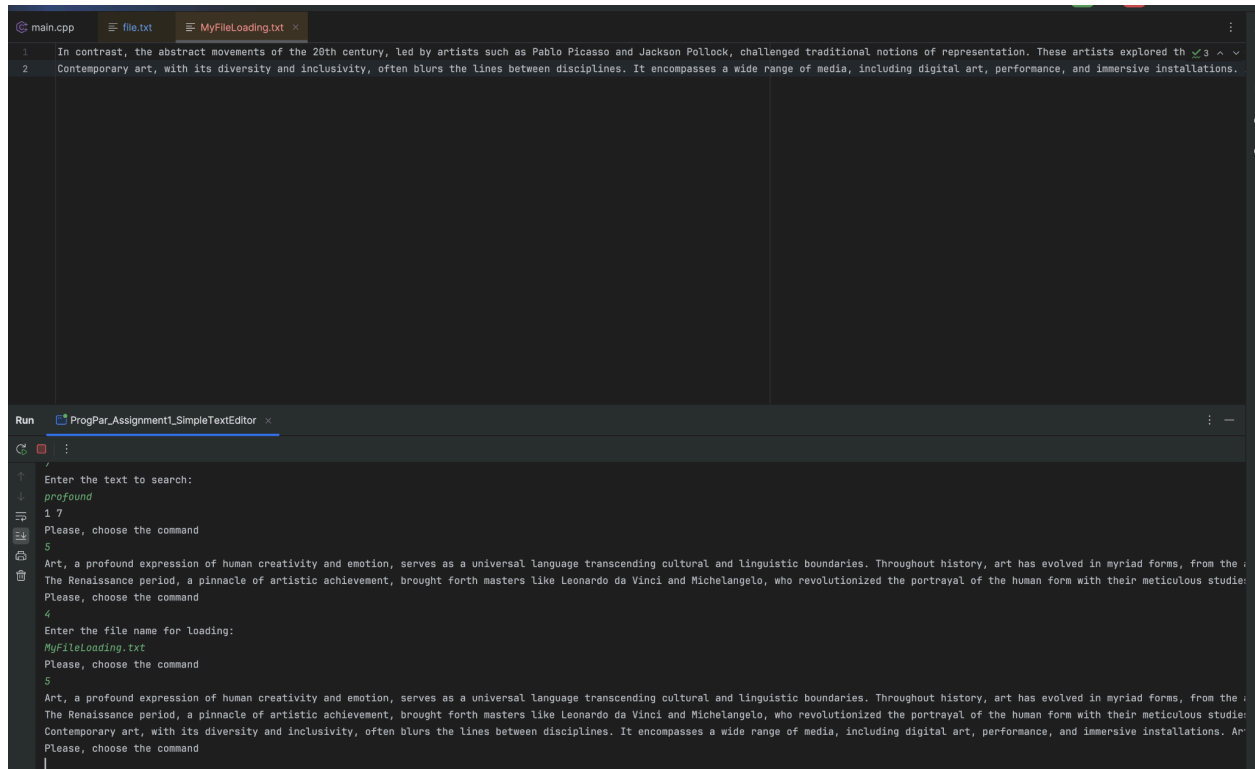
- 1 append
- 2 new line
- 3 append
- 4 search
- 5 print
- 6 load
- 7 print
- 8 insert
- 9 print
- 10 save

1-5.



The screenshot shows a C++ IDE with two windows. The top window, titled 'main.cpp', contains two lines of text: '1 Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studies' and '2 The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studies'. The bottom window, titled 'Run ProgPar_Assignment1_SimpleTextEditor', shows the output of the program. It displays a list of commands: '1 - Append text symbols to the end', '2 - Start the new line', '3 - Use files to saving the information', '4 - Use files to loading the information', '5 - Print the current text to console', '6 - Insert the text by line and symbol index', '7 - Search', and '8 - exit'. The user has entered '1' to select the first command. The program then prompts 'Enter text to append:' and the user has entered 'Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studies'. The program then prompts 'Please, choose the command' and the user has entered '2'. The program then prompts 'New line is started' and the user has entered '1'. The program then prompts 'Enter text to append:' and the user has entered 'The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studies'. The program then prompts 'Please, choose the command' and the user has entered '7'. The program then prompts 'Enter the text to search:' and the user has entered 'profound'. The program then displays the search results: '1 7' and '5'. The program then prompts 'Please, choose the command' and the user has entered '5'. The program then displays the text: 'Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studies'. The program then prompts 'Please, choose the command'.

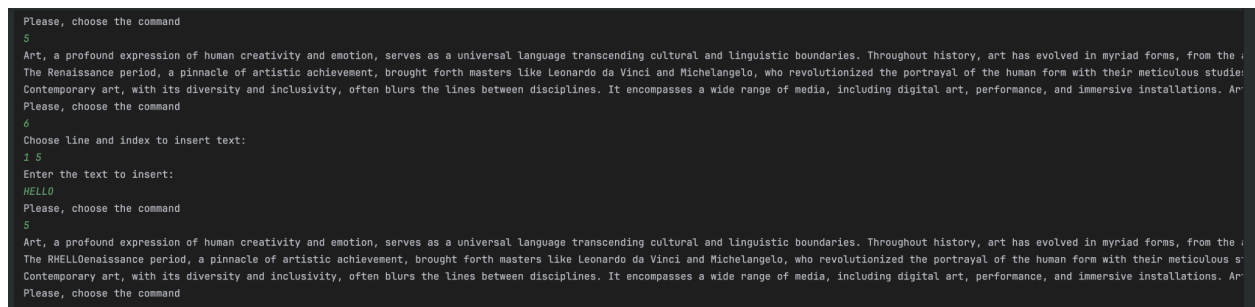
6-7.



```
main.cpp | file.txt | MyFileLoading.txt x
1 In contrast, the abstract movements of the 20th century, led by artists such as Pablo Picasso and Jackson Pollock, challenged traditional notions of representation. These artists explored th
2 Contemporary art, with its diversity and inclusivity, often blurs the lines between disciplines. It encompasses a wide range of media, including digital art, performance, and immersive installations.

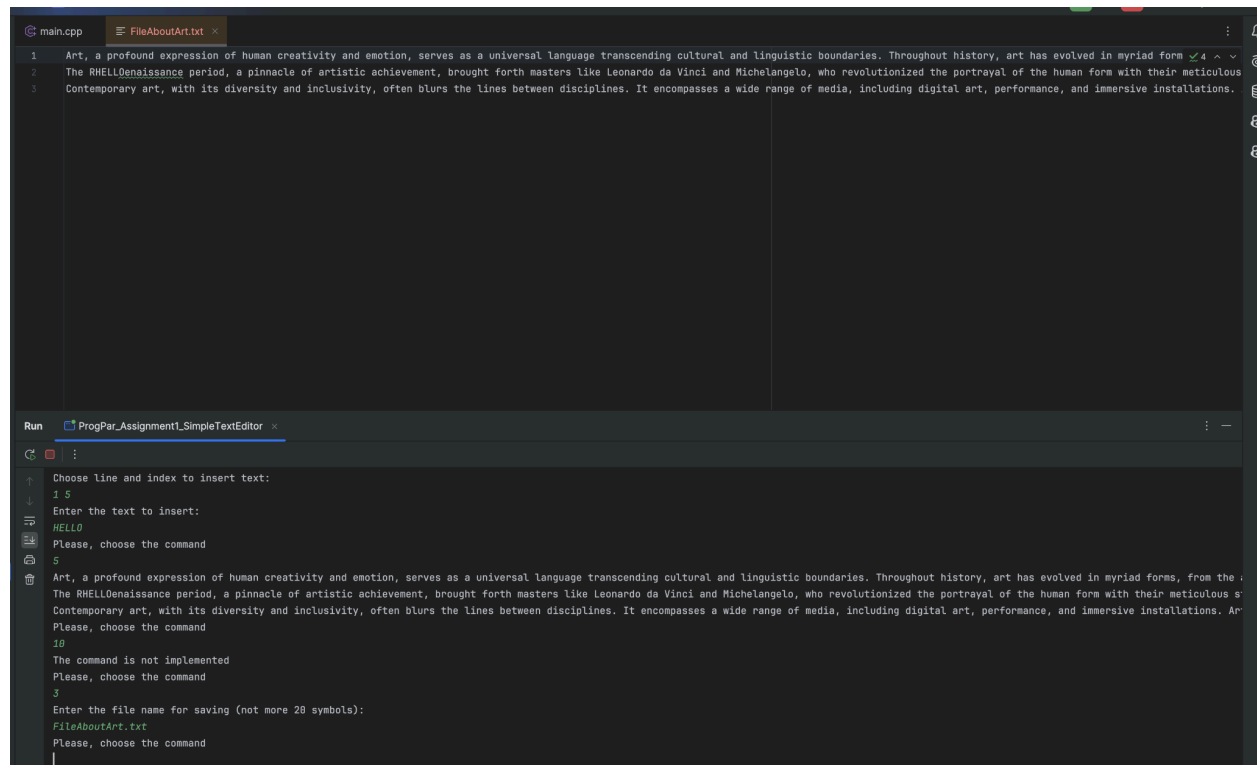
Run ProgPar_Assignment1_SimpleTextEditor x
Enter the text to search:
profound
1 7
Please, choose the command
5
Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the
The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studie
Please, choose the command
4
Enter the file name for loading:
MyFileLoading.txt
Please, choose the command
5
Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the
The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studie
Contemporary art, with its diversity and inclusivity, often blurs the lines between disciplines. It encompasses a wide range of media, including digital art, performance, and immersive installations. Ar
Please, choose the command
```

7-9.



```
Please, choose the command
5
Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the
The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studie
Contemporary art, with its diversity and inclusivity, often blurs the lines between disciplines. It encompasses a wide range of media, including digital art, performance, and immersive installations. Ar
Please, choose the command
6
Choose line and index to insert text:
1 5
Enter the text to insert:
HELLO
Please, choose the command
5
Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the
The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous studie
Contemporary art, with its diversity and inclusivity, often blurs the lines between disciplines. It encompasses a wide range of media, including digital art, performance, and immersive installations. Ar
Please, choose the command
```

10.



The screenshot shows a C++ IDE with two windows. The top window, titled 'main.cpp', contains three lines of text:

```
1 Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous  
2 The Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous  
3 Contemporary art, with its diversity and inclusivity, often blurs the lines between disciplines. It encompasses a wide range of media, including digital art, performance, and immersive installations.
```

The bottom window, titled 'Run ProgPar_Assignment1_SimpleTextEditor', shows the output of a program. It displays a menu with options 1, 2, and 3, and a prompt to enter the file name for saving. The user has entered 'FileAboutArt.txt'.

```
Run ProgPar_Assignment1_SimpleTextEditor
Choose line and index to insert text:
1 5
Enter the text to insert:
HELLO
Please, choose the command
5
Art, a profound expression of human creativity and emotion, serves as a universal language transcending cultural and linguistic boundaries. Throughout history, art has evolved in myriad forms, from the Renaissance period, a pinnacle of artistic achievement, brought forth masters like Leonardo da Vinci and Michelangelo, who revolutionized the portrayal of the human form with their meticulous
Contemporary art, with its diversity and inclusivity, often blurs the lines between disciplines. It encompasses a wide range of media, including digital art, performance, and immersive installations. Art
Please, choose the command
10
The command is not implemented
Please, choose the command
3
Enter the file name for saving (not more 20 symbols):
FileAboutArt.txt
Please, choose the command
```