

```
1 #include <stdio.h>
2
3 int main() {
4     char name[50];
5     int age;
6
7     FILE *fp = fopen("info.txt", "w");
8
9     if (fp == NULL) {
10         printf("Error opening file.\n");
11         return 1;
12     }
13
14     printf("Enter your name: ");
15     scanf("%s", name);
16
17     printf("Enter your age: ");
18     scanf("%d", &age);
19
20     fprintf(fp, "Name: %s\n", name);
21     fprintf(fp, "Age: %d\n", age);
22
23     fclose(fp);
24
25     printf("Data successfully saved to info.txt\n");
26
27     return 0;
28 }
29
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/tempCodeRunnerFile"
nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile
Enter your name: nikhil
Enter your age: 18
Data successfully saved to info.txt
nikhilsisodia@Nikhils-MacBook-Air T %
```

```
1 #include <stdio.h>
2
3 int main() {
4     char line[200];
5
6     FILE *fp = fopen("info.txt", "r");
7
8     if (fp == NULL) {
9         printf("Unable to open file.\n");
10        return 1;
11    }
12
13    while (fgets(line, sizeof(line), fp) != NULL) {
14        printf("%s", line);
15    }
16
17    fclose(fp);
18
19    return 0;
20}
21
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mnr0000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mnr0000gn/T/"tempCodeRunnerFile
● nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mnr0000gn/T/" && gcc tempCodeRunnerFile
empCodeRunnerFile
Name: nikhil
Age: 18
○ nikhilsisodia@Nikhils-MacBook-Air T %
```

```

1 #include <stdio.h>
2 #include <ctype.h>
3
4 int main() {
5     FILE *fp;
6     char filename[100];
7     char ch;
8
9     int characters = 0, words = 0, lines = 0;
10    int inWord = 0;
11
12    printf("Enter file name: ");
13    scanf("%s", filename);
14
15    fp = fopen(filename, "r");
16
17    if (fp == NULL) {
18        printf("Error opening file.\n");
19        return 1;
20    }
21
22    while ((ch = fgetc(fp)) != EOF) {
23        characters++;
24
25        if (ch == '\n')
26            lines++;
27
28        if (isspace(ch)) {
29            inWord = 0;
30        } else if (inWord == 0) {
31            words++;
32        }
33    }
34
35    printf("Characters: %d\n", characters);
36    printf("Words: %d\n", words);
37    printf("Lines: %d\n", lines);
38
39    fclose(fp);
40}

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/tempCodeRunnerFile"
nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile
Enter file name: info.txt
Characters: 21
Words: 4
Lines: 2
nikhilsisodia@Nikhils-MacBook-Air T %

```

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4
5 void copy_file_content() {
6     FILE *source_ptr, *dest_ptr;
7     char source_filename[100];
8     char dest_filename[100];
9     int c;
10
11    printf("Enter the source filename (to read from): ");
12    if (scanf("%99s", source_filename) != 1) return;
13
14    printf("Enter the destination filename (to write to): ");
15    if (scanf("%99s", dest_filename) != 1) return;
16
17    source_ptr = fopen(source_filename, "r");
18    if (source_ptr == NULL) {
19        printf("\nError: Could not open source file %s for reading.\n", source_filename);
20        return;
21    }
22
23    dest_ptr = fopen(dest_filename, "w");
24    if (dest_ptr == NULL) {
25        printf("\nError: Could not open destination file %s for writing.\n", dest_filename);
26        fclose(source_ptr);
27        return;
28    }
29
30    while ((c = fgetc(source_ptr)) != EOF) {
31        fputc(c, dest_ptr);

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/tempCodeRunnerFile"
nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile
Enter the source filename (to read from): info.txt
Enter the destination filename (to write to): file.txt

Success! Content copied from info.txt to file.txt.

nikhilsisodia@Nikhils-MacBook-Air T %

```
1 #include <stdio.h>
2
3 int main() {
4     char filename[100];
5     char text[200];
6     FILE *fp;
7
8     printf("Enter filename to open in append mode: ");
9     scanf("%s", filename);
10
11    fp = fopen(filename, "a");
12    if (fp == NULL) {
13        printf("Cannot open file.\n");
14        return 1;
15    }
16
17    printf("Enter the text to append: ");
18    getchar();
19    fgets(text, sizeof(text), stdin);
20
21    fputs(text, fp);
22
23    fclose(fp);
24
25    printf("Text appended successfully.\n");
26
27    return 0;
28}
29
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/"tempCodeRunnerFile
● nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile
tempCodeRunnerFile
Enter filename to open in append mode: info.txt
Enter the text to append: nikhil
Text appended successfully.
○ nikhilsisodia@Nikhils-MacBook-Air T %
```

```
1 #include <stdio.h>
2
3 int main() {
4     char filename[100];
5     FILE *fp;
6     char ch;
7
8     printf("Enter filename: ");
9     scanf("%s", filename);
10
11    fp = fopen(filename, "r");
12
13    if (fp == NULL) {
14        printf("Error: File does not exist or cannot be opened.\n");
15        return 1;
16    }
17
18    printf("\n--- File Content ---\n");
19
20    while ((ch = fgetc(fp)) != EOF) {
21        printf("%c", ch);
22    }
23
24    fclose(fp);
25
26    return 0;
27}
28
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/tempCodeRunnerFile"
nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile
Enter filename: info.txt

--- File Content ---

Name: nikhil
Age: 18
nikhil

nikhilsisodia@Nikhils-MacBook-Air T %

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <ctype.h>
4
5 void convert_file_case() {
6     FILE *input_ptr, *output_ptr;
7     const char *input_filename = "input.txt";
8     const char *output_filename = "output.txt";
9     int c;
10
11     input_ptr = fopen(input_filename, "r");
12     if (input_ptr == NULL) {
13         printf("Error: Could not open input file %s for reading.\n", input_filename);
14         printf("Please ensure a file named 'input.txt' exists with content.\n");
15         return;
16     }
17
18     output_ptr = fopen(output_filename, "w");
19     if (output_ptr == NULL) {
20         printf("Error: Could not open output file %s for writing.\n", output_filename);
21         fclose(input_ptr);
22         return;
23     }
24
25     while ((c = fgetc(input_ptr)) != EOF) {
26         if (islower(c)) {
27             c = toupper(c);
28         }
29         fputc(c, output_ptr);
30     }
31
32     printf("Success! All content from %s has been converted to uppercase and saved in %s.\n", input_fi
33
34     fclose(input_ptr);

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/v
● nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunn
empCodeRunnerFile
Note: This program requires an 'input.txt' file to exist in the same directory.
Success! All content from input.txt has been converted to uppercase and saved in output.txt.
○ nikhilsisodia@Nikhils-MacBook-Air T %

```

```

1 #include <stdio.h>
2 #include <ctype.h>
3
4 int main() {
5     FILE *fp;
6     char filename[100];
7     char ch;
8     int vowels = 0, consonants = 0;
9
10    printf("Enter filename: ");
11    scanf("%s", filename);
12
13    fp = fopen(filename, "r");
14
15    if (fp == NULL) {
16        printf("Cannot open file.\n");
17        return 1;
18    }
19
20    while ((ch = fgetc(fp)) != EOF) {
21        ch = tolower(ch);
22
23        if (ch >= 'a' && ch <= 'z') {
24            if (ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u')
25                vowels++;
26            else
27                consonants++;
28        }
29    }
30
31    fclose(fp);
32
33    printf("Vowels: %d\n", vowels);
34    printf("Consonants: %d\n", consonants);

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/tempCodeRunnerFile"
nikhilsisodia@Nikhils-MacBook-Air ~ %
Enter filename: info.txt
Vowels: 8
Consonants: 11

```

```

1 #include <stdio.h>
2 #include <stdlib.h>
3
4 void calculate_sum_and_average() {
5     FILE *file_ptr;
6     const char *filename = "numbers.txt";
7     int number;
8     long long sum = 0;
9     int count = 0;
10    double average = 0.0;
11
12    file_ptr = fopen(filename, "r");
13    if (file_ptr == NULL) {
14        printf("Error: Could not open file %s for reading.\n", filename);
15        printf("Please ensure a file named 'numbers.txt' exists with space-separated integers.\n");
16        return;
17    }
18
19    while (fscanf(file_ptr, "%d", &number) == 1) {
20        sum += number;
21        count++;
22    }
23
24    fclose(file_ptr);
25
26    if (count > 0) {
27        average = (double)sum / count;
28        printf("Total integers read: %d\n", count);
29        printf("Sum of the integers: %lld\n", sum);
30        printf("Average of the integers: %.2lf\n", average);
31    } else {
32        printf("No integers were found in the file %s.\n", filename);
33    }
34 }

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mn000gn/T/tempCodeRunnerFile"
nikhilsisodia@Nikhils-MacBook-Air ~ %
Total integers read: 4
Sum of the integers: 25
Average of the integers: 6.25

```

nikhilsisodia@Nikhils-MacBook-Air T %

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4
5 #define FILENAME "students.txt"
6 #define MAX_NAME_LEN 50
7 #define NUM_RECORDS 3
8
9 typedef struct {
10     char name[MAX_NAME_LEN];
11     int roll_number;
12     float marks;
13 } Student;
14
15 void write_records(Student students[], int count) {
16     FILE *file_ptr = fopen(FILENAME, "w");
17
18     if (file_ptr == NULL) {
19         printf("Error: Could not open file %s for writing.\n", FILENAME);
20         return;
21     }
22
23     for (int i = 0; i < count; i++) {
24         fprintf(file_ptr, "%s|%d|%.2f\n", students[i].name, students[i].roll_number, students[i].marks);
25     }
26
27     fclose(file_ptr);
28     printf("Successfully wrote %d records to %s.\n", count, FILENAME);
29 }
30
31 void read_and_display_records() {
32     FILE *file_ptr = fopen(FILENAME, "r");
33     Student s;
34     char line[200];

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

nikhilsisodia@Nikhils-MacBook-Air ~ % cd "/var/folders/mp/q_89ln6x0_1_3z1sjbnr0mnr0000gn/T/" && gcc tempCodeRunnerFile
empCodeRunnerFile
Successfully wrote 3 records to students.txt.

--- Reading Student Records ---

Name	Roll Number	Marks
Alice Johnson	101	85.50
Bob Smith	102	92.75
Charlie Brown	103	78.00

Total records read: 3

nikhilsisodia@Nikhils-MacBook-Air T %