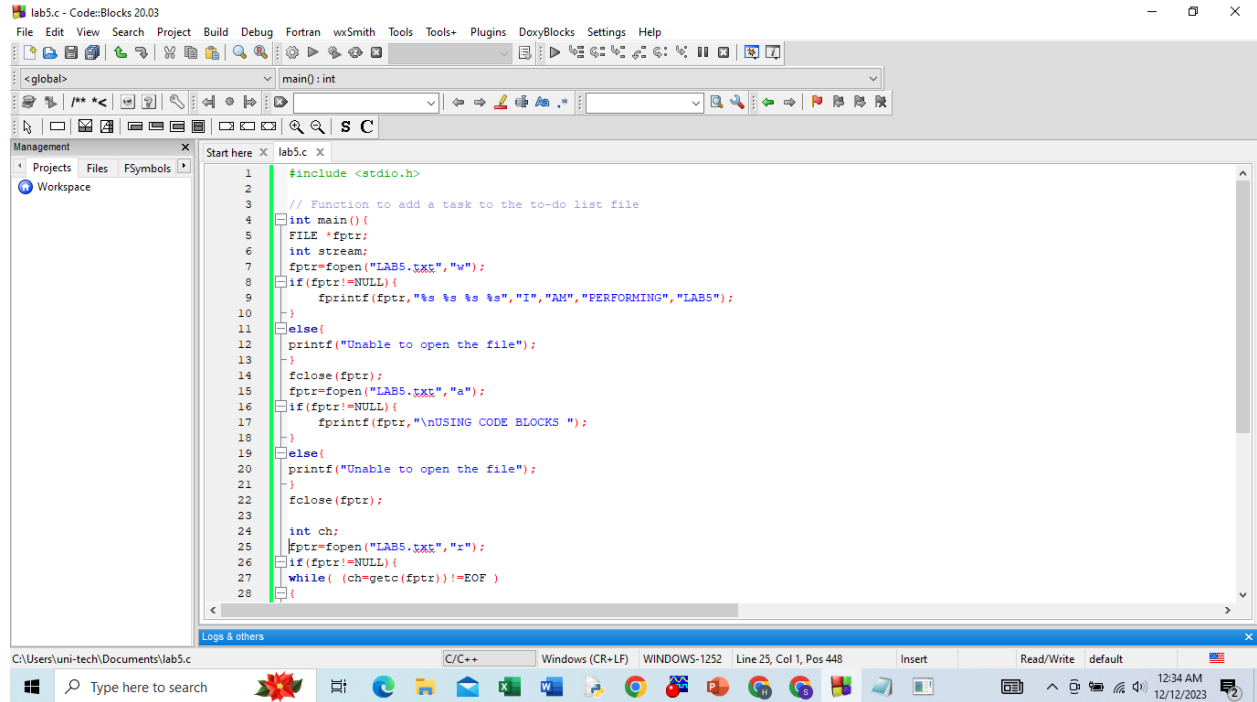
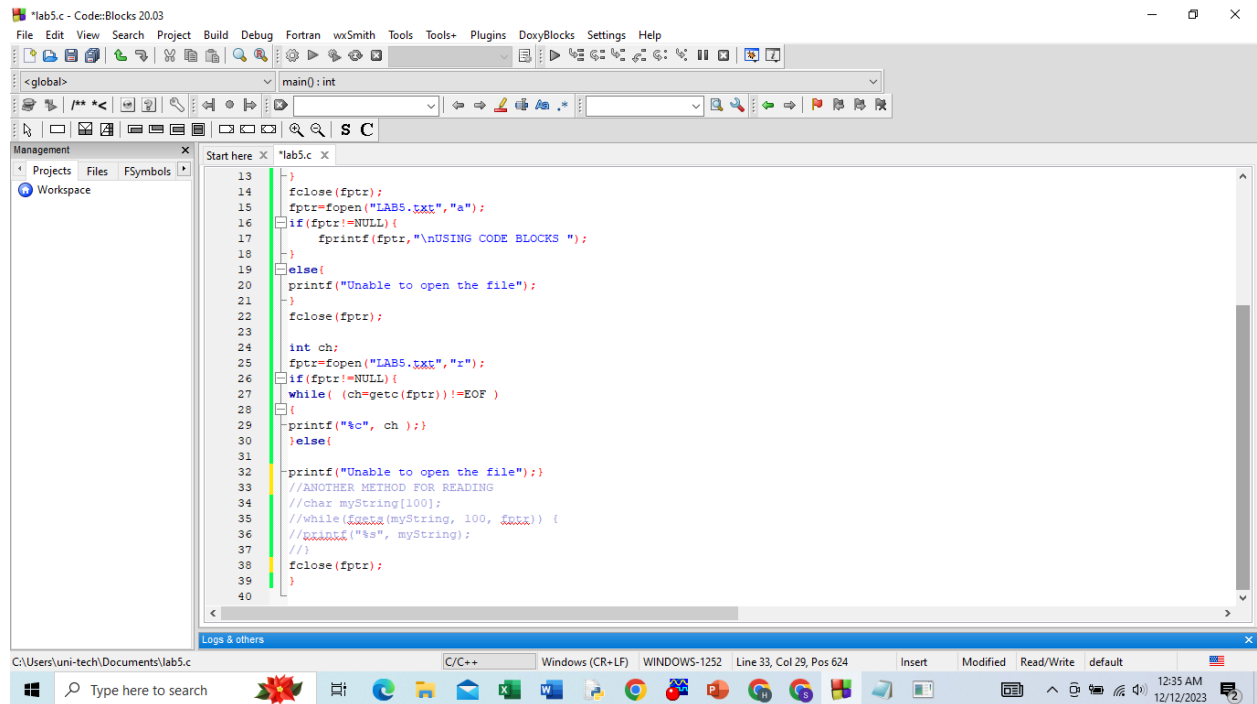


# LAB 5

Q1:



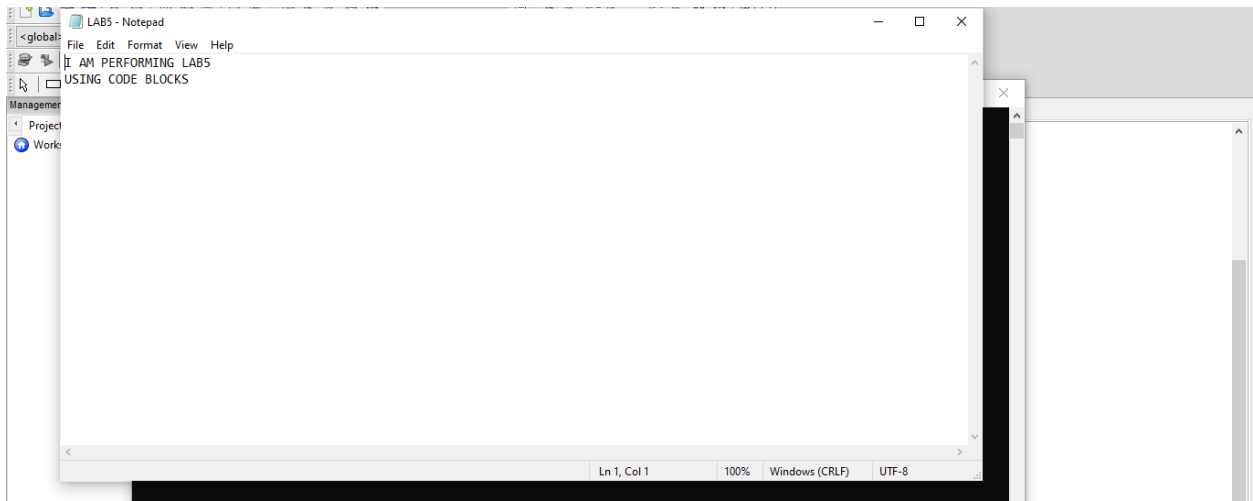
```
1 #include <stdio.h>
2
3 // Function to add a task to the to-do list file
4 int main() {
5     FILE *fptr;
6     int stream;
7     fptr=fopen("LAB5.txt","w");
8     if(fptr!=NULL){
9         fprintf(fptr,"%s %s %s %s","I","AM","PERFORMING","LAB5");
10    }
11    else{
12        printf("Unable to open the file");
13    }
14    fclose(fptr);
15    fptr=fopen("LAB5.txt","a");
16    if(fptr!=NULL){
17        fprintf(fptr,"\nUSING CODE BLOCKS ");
18    }
19    else{
20        printf("Unable to open the file");
21    }
22    fclose(fptr);
23
24    int ch;
25    fptr=fopen("LAB5.txt","r");
26    if(fptr!=NULL){
27        while( (ch=getc(fptr))!=EOF )
28        {
```



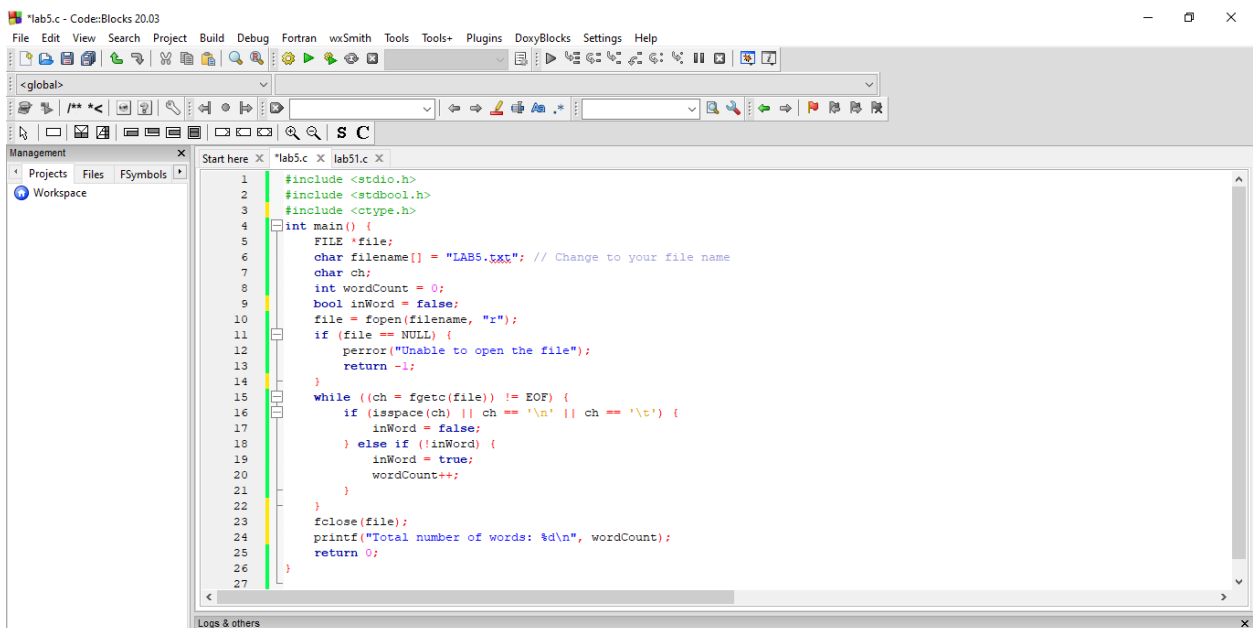
```
29        printf("%c", ch );
30    }else{
31
32        printf("Unable to open the file");
33        //ANOTHER METHOD FOR READING
34        //char myString[100];
35        //while(fgets(myString, 100, fptr)) {
36        //printf("%s", myString);
37        //}
38        fclose(fptr);
39    }
40 }
```

OUTPUT:

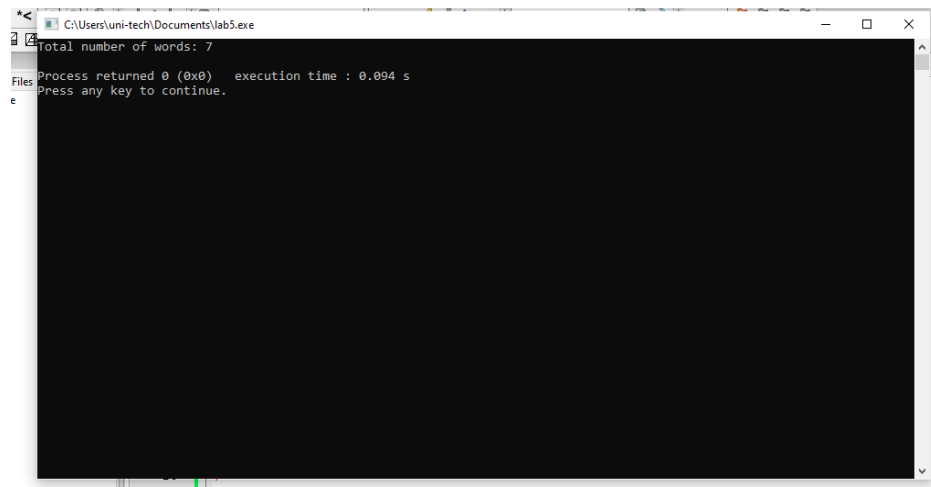
```
I AM PERFORMING LAB5
USING CODE BLOCKS
Process returned 0 (0x0)   execution time : 0.062 s
Press any key to continue.
```



Q2:

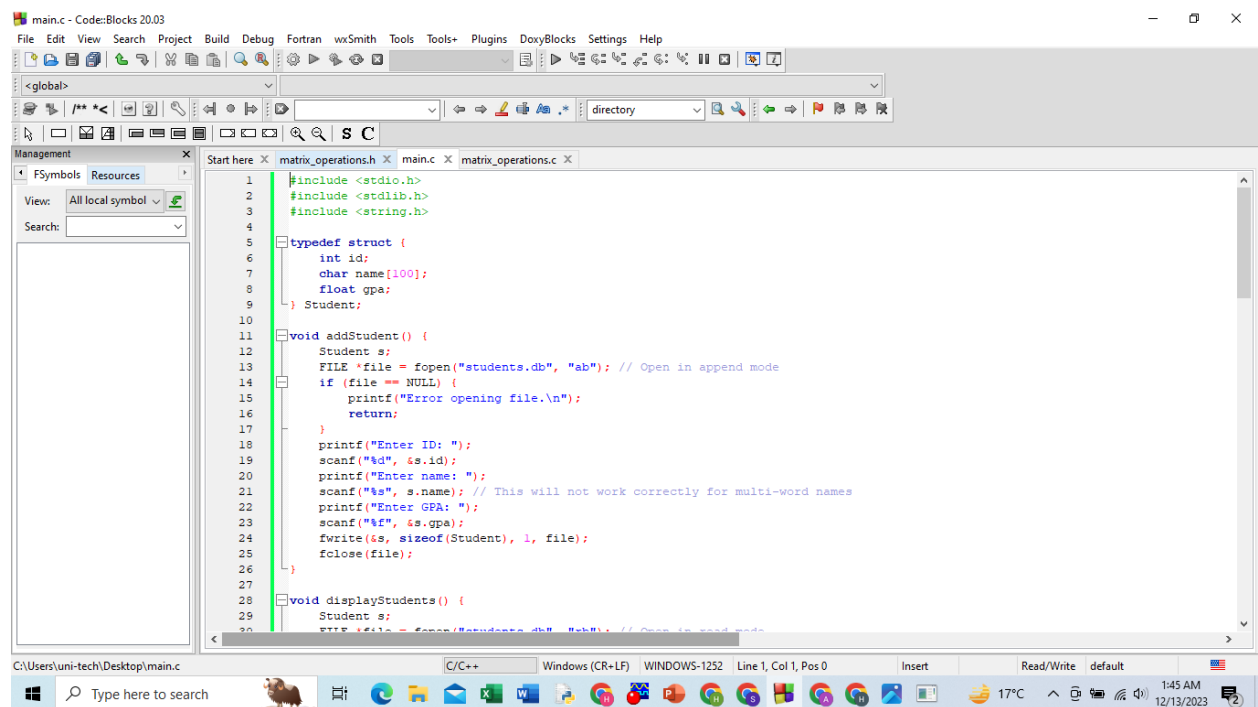


## OUTPUT:



```
C:\Users\uni-tech\Documents\lab5.exe
Total number of words: 7
Process returned 0 (0x0) execution time : 0.094 s
Press any key to continue.
```

## Q3:



```
main.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global>
View: All local symbol
Search:
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4
5 typedef struct {
6     int id;
7     char name[100];
8     float gpa;
9 } Student;
10
11 void addStudent() {
12     Student s;
13     FILE *file = fopen("students.db", "ab"); // Open in append mode
14     if (file == NULL) {
15         printf("Error opening file.\n");
16         return;
17     }
18     printf("Enter ID: ");
19     scanf("%d", &s.id);
20     printf("Enter name: ");
21     scanf("%s", s.name); // This will not work correctly for multi-word names
22     printf("Enter GPA: ");
23     scanf("%f", &s.gpa);
24     fwrite(&s, sizeof(Student), 1, file);
25     fclose(file);
26 }
27
28 void displayStudents() {
29     Student s;
30     FILE *file = fopen("students.db", "rb"); // Open in read mode
```

main.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

<global> deleteStudent(int id): void

directory

Management

FSymbols Resources

View: All local symbol

Search:

```
29 Student s;
30 FILE *file = fopen("students.db", "rb"); // Open in read mode
31 if (file == NULL) {
32     printf("Error opening file.\n");
33     return;
34 }
35 while (fread(&s, sizeof(Student), 1, file)) {
36     printf("ID: %d, Name: %s, GPA: %.2f\n", s.id, s.name, s.gpa);
37 }
38 fclose(file);
39 }
40
41 void deleteStudent(int id) {
42     Student s;
43     FILE *file = fopen("students.db", "rb"); // Open in read mode
44     FILE *temp = fopen("temp.db", "wb"); // Temporary file
45     if (file == NULL || temp == NULL) {
46         printf("Error opening file.\n");
47         return;
48     }
49     while (fread(&s, sizeof(Student), 1, file)) {
50         if (s.id != id) {
51             fwrite(&s, sizeof(Student), 1, temp);
52         }
53     }
54     fclose(file);
55     fclose(temp);
56     remove("students.db");
57     rename("temp.db", "students.db");
58 }
```

C:\Users\uni-tech\Desktop\main.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 55, Col 1, Pos 1423 Insert Read/Write default 17°C 1:45 AM 12/13/2023

main.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

<global> deleteStudent(int id): void

directory

Management

FSymbols Resources

View: All local symbol

Search:

```
54 fclose(file);
55 fclose(temp);
56 remove("students.db");
57 rename("temp.db", "students.db");
58 }
59
60 void modifyStudent(int id) {
61     Student s;
62     FILE *file = fopen("students.db", "rb+");
63     if (file == NULL) {
64         printf("Error opening file.\n");
65         return;
66     }
67     while (fread(&s, sizeof(Student), 1, file)) {
68         if (s.id == id) {
69             printf("Enter new name: ");
70             scanf("%s", s.name); // This will not work correctly for multi-word names
71             printf("Enter new GPA: ");
72             scanf("%f", &s.gpa);
73             fseek(file, -sizeof(Student), SEEK_CUR); // Move back to the beginning of the current record
74             fwrite(&s, sizeof(Student), 1, file);
75             break;
76         }
77     }
78     fclose(file);
79 }
80
81 int main() {
82     int choice, id;
83     while (1) {
```

C:\Users\uni-tech\Desktop\main.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 56, Col 1, Pos 1442 Insert Read/Write default 17°C 1:45 AM 12/13/2023

```
82 int choice, id;
83 while (1) {
84     printf("\n1. Add Student\n2. Display Students\n3. Delete Student\n4. Modify Student\n5. Exit\nEnter choice: ");
85     scanf("%d", &choice);
86     switch (choice) {
87         case 1:
88             addStudent();
89             break;
90         case 2:
91             displayStudents();
92             break;
93         case 3:
94             printf("Enter ID to delete: ");
95             scanf("%d", &id);
96             deleteStudent(id);
97             break;
98         case 4:
99             printf("Enter ID to modify: ");
100            scanf("%d", &id);
101            modifyStudent(id);
102            break;
103        case 5:
104            exit(0);
105        default:
106            printf("Invalid choice\n");
107    }
108 }
109 return 0;
110 }
```

## OUTPUT:

```
1. Add Student
2. Display Students
3. Delete Student
4. Modify Student
5. Exit
Enter choice: 1
Enter ID: 43551
Enter name: ABDUL BASIT
Enter GPA:
1. Add Student
2. Display Students
3. Delete Student
4. Modify Student
5. Exit
Enter choice: Enter ID: Enter name: Enter GPA: 3.5
1. Add Student
2. Display Students
3. Delete Student
4. Modify Student
5. Exit
Enter choice: 1
Enter ID: 22333
Enter name: AHMED
Enter GPA: 3.4
1. Add Student
2. Display Students
3. Delete Student
```

```
Enter GPA: 3.4
1. Add Student
2. Display Students
3. Delete Student
4. Modify Student
5. Exit
Enter choice: 2
ID: 43551, Name: ABDUL, GPA: 0.00
ID: 642008, Name: BASIT, GPA: 3.50
ID: 22333, Name: AHMED, GPA: 3.40
1. Add Student
2. Display Students
3. Delete Student
4. Modify Student
5. Exit
Enter choice: 4
Enter ID to modify: 22333
Enter new name: ALI
Enter new GPA: 3.8
1. Add Student
2. Display Students
3. Delete Student
4. Modify Student
5. Exit
Enter choice: 3
Enter ID to delete:
ABDUL BASIT
```