

Compiler Design Lab-1

Mohit Kumar 23IT3028

Question-1:

FOR READING:

Code:

```
#include <bits/stdc++.h>
using namespace std;

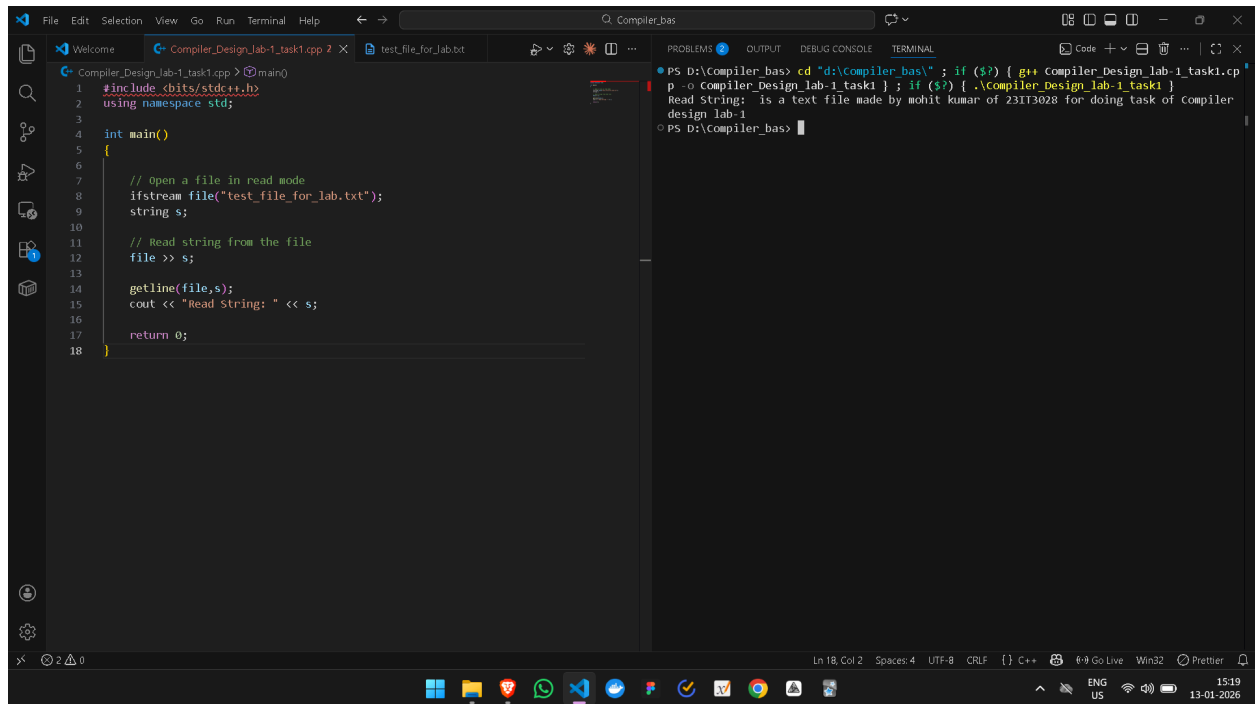
int main()
{
    // Open a file in read mode
    ifstream file("test_file_for_lab.txt");
    string s;

    // Read string from the file
    file >> s;

    getline(file,s);
    cout << "Read String: " << s;

    return 0;
}
```

Output:



Part-2:

Writing in the file

Code:

```
#include <bits/stdc++.h>
using namespace std;

int main()
{

    // Open a file in read mode
    ifstream file("test_file_for_lab.txt");
    string s;

    // Read string from the file
    file >> s;

    getline(file,s);
    cout << "Read String: " << s;

    cout<<endl;
    cout<<endl;
```

```

        ofstream outputFile("test_file_for_lab");

        outputFile << "Writing to file with ofstream! in my test file for part
2 of task-1"<<endl;

        outputFile << "This is a second line added straight from VS Code
"<<endl;


        cout<<"This is the new test after giving input:";
        cout << "Read String: " << s;


        return 0;
}

```

Output:

```

PS D:\Compiler_bas> cd "d:\Compiler_bas\" ; if ($?) { g++ Compiler_Design_lab-1_task1.cpp -o Compiler_Design_lab-1_task1 } ; if ($?) { .\Compiler_Design_lab-1_task1 }
Read String: is a text file made by mohit kumar of 231T3028 for doing task of compiler design lab-1
This is the new test after giving input:Read String: is a text file made by mohit kumar of 231T3028 for doing task of Compiler design lab-1
PS D:\Compiler_bas>

```

Question-2:

Code for counting:

```
#include<bits/stdc++.h>
using namespace std;

int main() {

    string filename = "test_file_for_lab.txt";

    ofstream outFile("out_put_for_question_2");
    if (outFile.is_open()) {
        outFile << "This is line one.\n";
        outFile << "This is line two, with a few more words.\n";
        outFile << "Line three is here.";
        outFile.close();
    }

    ifstream inFile(filename);

    if (!inFile.is_open()) {
        cerr << "Error opening file: " << filename << endl;
        return 1;
    }

    char chars;
    int char_count = 0;
    int wordCount = 0;
    int line = 0;
    bool inWord = false;
    char previous_chracter = '\\0';

    while (inFile.get(chars)) {
        char_count++;

        if (chars == '\\n') {
            line++;
        }

        // Check for words (simple space, tab, or newline delimited)
        if (chars == ' ' || chars == '\\t' || chars == '\\n') {
```

```

        if (inWord) {
            wordCount++;
            inWord = false;
        }
    } else {
        inWord = true;
    }

    previous_chracter = chars;
}

if (inWord) {
    wordCount++;
}

if (char_count > 0 && previous_chracter != '\n') {
    line++;
}

inFile.close();

cout << "\nFile analysis for '" << filename << "':" << endl;
cout << "charss: " << char_count << endl;
cout << "Words:" << wordCount << endl;
cout << "Lines:" << line << endl;

return 0;
}

```

Output:

