Experiment – 1

AIM- Write a program to find whether the given program has single line comment or multi line comment.

Description -

Single line Comment

Represented as // double forward slash

It is used to denote single line comment. It apply comment to a single line only. It is refereed as C++-style comments as it is originally part of C++ programming.

for example: // single line comment

Multi-line comment

Represented as /* any_text */ start with forward slash and asterisk (/ *) and end with asterisk and forward slash (*/).

It is used to denote multi-line comment. It can apply comment to more than a single line. It is referred as C-Style comment as it was introduced in C programming.

Code -

```
#include <bits/stdc++.h>

using namespace std;

void ifComments(string program){
    int n = program.length();
    string res;

    bool singleLineComment = 0;
    bool multiLineComment = 0;

    for (int i = 0; i < n; i++){
        if (program[i] == '/' && program[i + 1] == '/'){
            singleLineComment = 1;
```

```cpp
        }else if (program[i] == '/' && program[i + 1] == '*'){
            while(i<n){
                if(program[i] == '*' && program[i+1] == '/'){
                    multiLineComment = 1;
                    break;
                }
                i++;
            }
        }
    }

    if (multiLineComment == 1){
        cout << "Multiline comment is present" << endl;
    }
    if (multiLineComment == 0){
        cout << "Multiline comment is not present" << endl;
    }
    if (singleLineComment == 1){
        cout << "Singleline comment present" << endl;
    }
    if (singleLineComment == 0){
        cout << "Singleline comment not present" << endl;
    }
}

int main(){
    string program = " /* Test program */        \
                    int main(){                 \
                    // variable declaration     \
                    int sum, y, z;              \
                     /* This is a               \
                        multiline               \
                        comment for             \
                        testing */              \
                    sum = y + z;                \
                    return 0;                   \
                    }                           \
                    ";
    ifComments(program);
```

```
    return 0;
}
```

Output –

File   Edit   View   Search   Terminal   Help
prince@pp-asus:~/lab/CD_lab/1.Comments$ g++ code.cpp
prince@pp-asus:~/lab/CD_lab/1.Comments$ ./a.out
Multiline comment is present
Singleline comment present
prince@pp-asus:~/lab/CD_lab/1.Comments$

Learnings –

Through this program, we came to know about single-line and multi-line comments and we learnt to make a program which could identify single-line and multi-line comments and count them.