



PIMPRI CHINCHWAD EDUCATION TRUST'S.
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING
(An Autonomous Institute)

Class : SY BTech	Acad. Yr. 2025-26	Semester : I
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Department: Computer Engineering		Division : A Course
Name : Data Structures Laboratory Course		Code:BCE23PC02
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Assignment No. 6

Problem Statement: Write a program for Mathematical Expression Evaluation in Calculator: Implement a calculator that supports evaluation of complex arithmetic expressions using stacks for operands and operators.

Source Code :

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

int main()
{
    string exp;
    stack<char> st;
    cout << "Enter Exp: ";
    getline(cin, exp);
    // getchar();
    for (int i = 0; i < exp.size(); i++)
    {
        if (exp[i] == '+' || exp[i] == '-' || exp[i] == '*' || exp[i] == '/')
        {
            int t1 = st.top() - '0';
            st.pop();
            int t2 = st.top() - '0';
            st.pop();
            int sol = 0;
            switch (exp[i])
            {
                case '+':
                    sol = t1 + t2;
                    break;
```

```

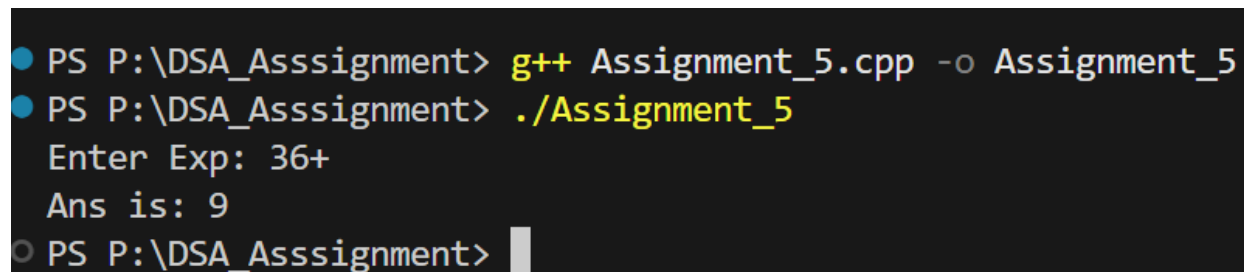
        case '-':
            sol = t2 - t1;
            break;
        case '*':
            sol = t1 * t2;
            break;
        case '/':
            sol = t2 / t1;
            break;
        default:
            break;
    }
    st.push(char(sol)+'0');
} else {
    st.push(exp[i]);
}
}

cout<<"Ans is: "<<st.top();

return 0;
}

```

Screen Shot of Output :



```

PS P:\DSA_Asssignment> g++ Assignment_5.cpp -o Assignment_5
PS P:\DSA_Asssignment> ./Assignment_5
Enter Exp: 36+
Ans is: 9
PS P:\DSA_Asssignment>

```

Conclusion:

Thus, we have successfully implemented the C++ program for Mathematical Expression Evaluation in Calculator: Implement a calculator that supports evaluation of complex arithmetic expressions using stacks for operands and operators