



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

Class : SY BTech**Acad. Yr. 2025-26****Semester : I****Name of the student: Varad Amol Pisale****PRN : 124B1B043****Department: Computer Engineering****Division : A****Course Name : Data Structures Laboratory****Code: BCE23PC02****Completion Date : 15/10/2025**

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])
```

```
            {
```

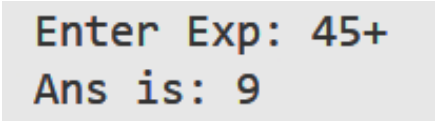
```
                case '+':
```

```
        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 :



```
Enter Exp: 45+
Ans is: 9
```

Conclusion: Hence we have successfully implemented a calculator using stack.