

```
#include<iostream>
#include<stdlib.h>

using namespace std;
```

```
template <class T> class Stack
{
    int max,top;
    T stack[100];

    public:
        Stack();
        int isFull();
        int isEmpty();
        void push(T data);
        T pop();
};
```

```
template <class T> Stack <T> :: Stack()
{
    max=99;
    top=0;
}
```

```
template <class T> int Stack <T> :: isFull()
{
    if (top==max)    return 1;
    else            return 0;
}
```

```
template <class T> int Stack <T> :: isEmpty()
{
    if (top==0)    return 1;
    else          return 0;
}
```

```
template <class T> void Stack <T> :: push(T data)
{
    top=top+1;
    stack[top]=data;
}
```

```
template <class T> T Stack <T> :: pop()
{
    T pdata;
    pdata=stack[top];
    top=top-1;
    return(pdata);
}
```

```
#include "Stack.h"
```

```
main()
```

```
{    char postfix[100];
```

```
    Stack <int> st;
```

```
    char x;
```

```
    int val;
```

```
    int op1, op2, result;
```

```
    cout << ".....Enter the Postfix Expression..... ? ";
```

```
    cin >> postfix;
```

```
    for(int i=0; postfix[i]!='\0'; ++i)
```

```
    {
```

```
        x=postfix[i];
```

```
    if ( isalpha ( x ) )
```

```
    {
```

```
        cout << ".....Enter Value of Operand..... " << x << " ? ";
```

```
        cin >> val;
```

```
        st.push(val);
```

```
    }
```

```
    else
```

```
    {
```

```
        op2=st.pop();
```

```
        op1=st.pop();
```

```
        switch(x)
```

```
        {
```

```
            case '+' :    result=op1+op2;  
                          st.push(result);  
                          break;
```

```
            case '-' :    result=op1-op2;  
                          st.push(result);  
                          break;
```

```
            case '*' :    result=op1*op2;  
                          st.push(result);  
                          break;
```

```
            case '/' :    result=op1/op2;  
                          st.push(result);  
                          break;
```

```
        }
```

```
    }
```

```
}
```

```
    cout << ".....Result of Postfix Expression Evaluated..... " << st.pop() << endl;
```

```
}
```
