

Evaluating Arithmetic Expression

```
#include <stdio.h>
#include <string.h>
#define Max 20
int stack [MAX]; int top = -1;
char expr[MAX];
Void Push (int elen);
int pop();
int main()
{
    int i, a, b, c, e;
    printf("Enter the post fix expression:");
    gets (expr);
    for (i=0; i<strlen(expr); i++)
    {
        if (expr[i]=='+' || expr[i]=='-' || expr[i] == '*' || expr[i] == '/')
        {
            b= pop();
            a = pop();
            Switch (expr [i])
            {
                case '+': c=a+b; push (c); break;
                case '-': c=a-b; push (c); break;
                case '*': c=a*b; push (c); break;
                case '/': c=a/b; push (c); break;
            }
        }

        else
        {
            printf(' Enter the value of % C", exp[i]);
            Scanf ("%d", &e);
            Push (e);
        }
    }
    printf("The result is %d", pop ());
    return 0;
}

void push (int ele).
{
    top = top + 1;
    stack [top]= elem;
}
```

```
intpop ()  
{  
  int e;  
  e = stack[top];  
  top=top-1;  
  return e;  
}
```

Output

Enter the Postfix expression: abc+ *d*

Enter the value of a: 2

Enter the value of b: 3

Enter the value of c: 4

Enter the value of d: 5

The result is 70.