

Evaluate POSTFIX Expression Using Stack

```
#include<stdio.h>
int stack[20];
int top = -1;

void push(int x)
{
    stack[++top] = x;
}

int pop()
{
    return stack[top--];
}

int main()
{
    char exp[20];
    char *e;
    int n1,n2,n3,num;
    printf("Enter the expression :: ");
    scanf("%s",exp);
    e = exp;
    while(*e != '\0')
    {
        if(isdigit(*e))
        {
            num = *e - 48;
            push(num);
        }
        else
        {
            n1 = pop();
            n2 = pop();
            switch(*e)
            {
                case '+':
                {
```

```

        n3 = n1 + n2;
    break;
    }
    case '-':
    {
        n3 = n2 - n1;
        break;
    }
    case '*':
    {
        n3 = n1 * n2;
        break;
    }
    case '/':
    {
        n3 = n2 / n1;
        break;
    }
    }
    push(n3);
}
e++;
}
printf("\nThe result of expression %s = %d\n\n",exp,pop());
return 0;

}

```

OUTPUT:

Enter the expression :: 245+*

The result of expression 245+* = 18