assingment3prog2.c

```
1 #include <stdio.h>
   #include <stdlib.h>
 3
   #include <ctype.h>
 4 int stack[10];
 5
   int top = -1;
   void push(int x)
 7
 8
        top = top + 1;
 9
        stack[top] = x;
10
    }
    int pop()
11
12
    {
13
        return (stack[top--]);
14
    }
   void display()
15
16
    {
17
        printf("%d", stack[top]);
18
    }
19
   void main()
20
    {
21
        char exp[10];
22
        char *p;
23
        int a, b, num, result;
24
        printf("ENTER THE EXPRESSION\n");
25
        fgets(exp, 10, stdin);
26
        p = exp;
27
        puts(exp);
28
        while (*p != '\0')
29
        {
30
            p++;
        }
31
32
        p--;
        while (*p != '\0')
33
34
35
            if (isdigit(*p))
36
37
                num = *p - 48;
38
                push(num);
            }
39
40
            else
41
            {
42
                a = pop();
43
                b = pop();
44
                switch (*p)
45
                {
                case '+':
46
47
                     result = a + b;
48
                     break;
49
                case '-':
50
                     result = a - b;
51
                     break;
                case '*':
52
```

```
53
                  result = a * b;
54
                  break;
              case '/':
55
56
                  result = a / b;
57
                  break;
58
             push(result);
59
60
          }
          p--;
61
62
       display();
63
64 }
```