

16 Write a C program to implement postfix expression evaluation

```
#include <stdio.h>

#include <ctype.h>

int stack[100];

int top = -1;

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

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

int evaluate(char expr[])
{
    int i, a, b, result;
    for (i = 0; expr[i] != '\0'; i++)
    {
        char ch = expr[i];
        if (isdigit(ch))
        {
            push(ch - '0');
        }
        else {
            b = pop();
            a = pop();
            if (ch == '+') result = a + b;
            else if (ch == '-') result = a - b;
```

```

        else if (ch == '*') result = a * b;
        else if (ch == '/') result = a / b;
    push(result);
    }
}
return pop();
}

int main() {
    char expr[100];

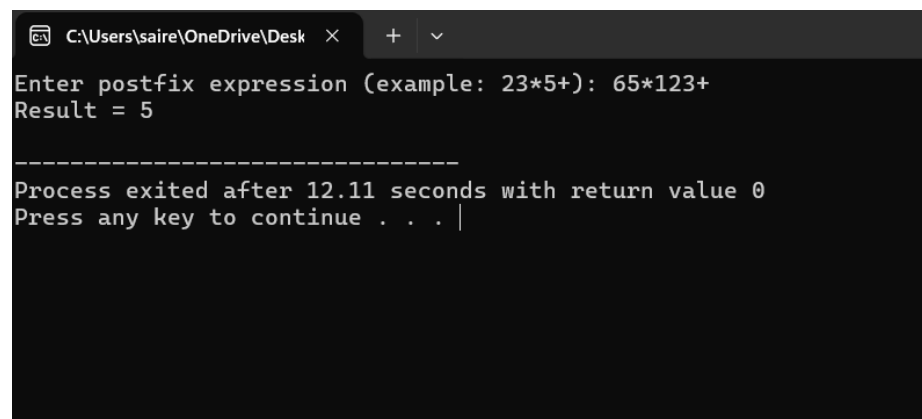
    printf("Enter postfix expression (example: 23*5+): ");
    scanf("%s", expr);

    int answer = evaluate(expr);
    printf("Result = %d\n", answer);

    return 0;
}

```

Output



```

C:\Users\saire\OneDrive\Desktop >
Enter postfix expression (example: 23*5+): 65*123+
Result = 5

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Process exited after 12.11 seconds with return value 0
Press any key to continue . . . |

```