

EX 6 EVALUATING ARITHMETIC EXPRESSION

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#include <stdio.h>
#include <string.h>
#include <ctype.h>
int top = -1;
int stack[100];
void push (int data) {
    stack[++top] = data;
}
int pop () {
    int data;
    if (top == -1)
        return -1;
    data = stack[top];
    stack[top] = 0;
    top--;
    return (data);
}
int main()
{
    char str[100];
    int i, data = -1, operand1, operand2, result;
    printf("Enter ur postfix expression:");
    fgets(str, 100, stdin);
    for (i = 0; i < strlen(str); i++)
    {
        if (isdigit(str[i]))
        {
            data = (data == -1) ? 0 : data;
            data = (data * 10) + (str[i] - 48);
            continue;
        }
        if (data != -1)
        {
            push(data);
        }
        if (str[i] == '+' || str[i] == '-' || str[i] == '*' || str[i] == '/')
        {
            operand2 = pop();
            operand1 = pop();
            if (operand1 == -1 || operand2 == -1)
                break;
            switch (str[i])
            {
                case '+':
                    result = operand1 + operand2;
                    push(result);
                    break;
                case '-':
```

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        result = operand1 - operand2;
        push(result);
        break;
        case '*':
        result = operand1 * operand2;
        push(result);
        break;
        case '/':
        result = operand1 / operand2;
        push(result);
        break;
    }
}
data = -1;
}
if (top == 0)
printf("The answer is:%d\n", stack[top]);
else
printf("u have given wrong postfix expression\n");
return 0;
}

```