



0101010101001010101  
0110111010101101001  
011001010110101010  
11101  
1010101011100101  
1  
11010101101000001

# Postfix Evaluation Project

By

Mostafa Abd El-Aleem  
CE101: Structured Programming  
and Data Structures  
Dr. Tamer Fouad



```

import java.util.Scanner;
import java.util.Stack;

public class PostfixEval {

    public static void main(String[] args) {
        Scanner getInput = new Scanner(System.in);
        System.out.print("Enter your postfix equation: ");
        String input = getInput.nextLine();
        evaluation(input);
        getInput.close();
    }

    static void evaluation(String eqn) {
        Stack<Integer> stack = new Stack<Integer>();
        int x1, x2; char op;
        for (int i = 0; i < eqn.length(); i++) {
            if (eqn.charAt(i) >= '0' && eqn.charAt(i) <= '9') {
                stack.push(Character.getNumericValue(eqn.charAt(i)));
            } else if (eqn.charAt(i) >= '*' && eqn.charAt(i) <= '/') {
                x1 = stack.pop();
                x2 = stack.pop();
                op = eqn.charAt(i);
                switch (op) {
                    case '+':
                        stack.push(x2 + x1);
                        break;
                    case '-':
                        stack.push(x2 - x1);
                        break;
                    case '*':
                        stack.push(x2 * x1);
                        break;
                    case '/':
                        stack.push(x2 / x1);
                        break;
                    default:
                        System.err.println("Error! no valid operator");
                        break;
                }
            }
        }
        printStack(stack);
    }

    static void printStack(Stack<Integer> s) {
        if (s.isEmpty()) {
            System.out.println("You've nothing in your stack!");
        } else {
            System.out.printf("Evaluation is %s \n", s);
        }
    }
}

```