61050192 ธนพล กฤตินัดดากุล

```java
public class Infix_Postfix {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Stack st = new Stack();// FILO
        String infix = sc.nextLine(); // รับสมการ
        String postfix = "";
        StringTokenizer token = new StringTokenizer(infix, " "); // แยกด้วย " "
        Queue<String> q = new LinkedList<>();// FIFO

        while (token.hasMoreTokens()) { // แยกจนกว่าจะหมด
            String temp = token.nextToken();

            if (temp.equals("+") || temp.equals("-")) {
                while (!st.isEmpty() && !st.peek().equals("("))
                    q.add((String) st.pop());
                st.push(temp);

            } else if (temp.equals("*") || temp.equals("/")) {
                while (!st.isEmpty() && !st.peek().equals("("))
                    q.add((String) st.pop());

                st.push(temp);
            } else if (temp.equals("("))
                st.push(temp);
            else if (temp.equals(")")) {
                while (!st.peek().equals("(")) {
                    q.add((String) st.pop());
                }
                st.pop();
            } else
                q.add(temp);
        } // while
        while (!st.empty()) {
            q.add((String) st.pop());
        }

        System.out.println(q);
        System.out.println(computePost_Fix(q));
    }// main
```

```
47
48      static double computePost_Fix(Queue<String> q) {
49          Stack st = new Stack();
50          double x, y;
51          while (q.size() != 0) {
52              String token = q.poll();
53              if (token.equals("+")) {
54                  y = (double) st.pop();
55                  x = (double) st.pop();
56                  st.push(x + y);
57              } else if (token.equals("-")) {
58                  y = (double) st.pop();
59                  x = (double) st.pop();
60                  st.push(x - y);
61              } else if (token.equals("*")) {
62                  y = (double) st.pop();
63                  x = (double) st.pop();
64                  st.push(x * y);
65              } else if (token.equals("/")) {
66                  y = (double) st.pop();
67                  x = (double) st.pop();
68                  st.push(x / y);
69              } else
70                  st.push(Double.parseDouble(token));
71          }
72          return (double) st.pop();
73      }
74  }
```