**/\*INFIX EXPRESSION TO POSTFIX EXPRESSION\*/**

import java.util.ArrayDeque;

import java.util.Scanner;

import java.util.Deque;

import java.util.Stack;

class Test1

{

static int Prec(char ch)

{

switch(ch)

{

case'+':

case'-':

return 1;

case'\*':

case'/':

return 2;

case'^':

return 3;

}

return -1;

}

static String infixToPostfix(String exp)

{

String result = new String("");

Deque<Character>Stack=new ArrayDeque<Character>();

for (int i=0;i<exp.length();i++)

{

char c = exp.charAt(i);

if (Character.isLetterOrDigit(c))

result+=c;

else if(c=='(')

Stack.push(c);

else if(c==')')

{

while(!Stack.isEmpty()&& Stack.peek()!='(')

{

result+=Stack.peek();

Stack.pop();

}

Stack.pop();

}

else

{

while(!Stack.isEmpty()&& Test1.Prec(c)<=Prec(Stack.peek()))

{

result+=Stack.peek();

Stack.pop();

}

Stack.push(c);

}

}

while(!Stack.isEmpty())

{

if(Stack.peek()=='(')

return "Invalid Expression";

result+= Stack.peek();

Stack.pop();

}

return result;

}

public static void main(String[]args)

{

Scanner obj=new Scanner(System.in);

System.out.println("CONVERSION OF INFIX TO POSTFIX EXPRESSION");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("Enter the infix expression:");

String exp=obj.nextLine();

System.out.println(" Postfix Expression:");

System.out.println(infixToPostfix(exp));

}

}

**OUTPUT :**

CONVERSION OF INFIX TO POSTFIX EXPRESSION

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Enter the infix expression:

(a+b)\*(c-d)

Postfix Expression:

ab+cd-\*