**ASSIGNMENT NO: 05**

For given expression eg. a-b\*c-d/e+f construct inorder sequence and traverse it using postordertraversal(non recursive)

**Code:**

#include<bits/stdc++.h>

using namespace std;

int precedence(char m)

{

if(m == '^')

return 3;

else if(m == '\*' || m == '/')

return 2;

else if(m == '+' || m == '-')

return 1;

}

void infix\_to\_postfix(string t)

{

stack<char> s;

int l = t.length();

string ans;

for(int i = 0; i< l; i++)

{

if((t[i] >= 'a' && t[i] <= 'z') || (t[i] >= 'A' && t[i] <= 'Z'))

ans+=t[i];

else if(t[i] == '(')

s.push('(');

else if(t[i] == ')')

{

while(s.top() != '(')

{

char c = s.top();

ans += c;

s.pop();

}

if(s.top() == '(')

{

char c = s.top();

s.pop();

}

}

else{

while(s.empty()==false && precedence(t[i]) <= precedence(s.top()))

{

char c = s.top();

ans += c;

s.pop();

}

s.push(t[i]);

}

}

while(s.empty() == false)

{

char c = s.top();

ans += c;

s.pop();

}

cout<<ans<<endl;

}

int main()

{

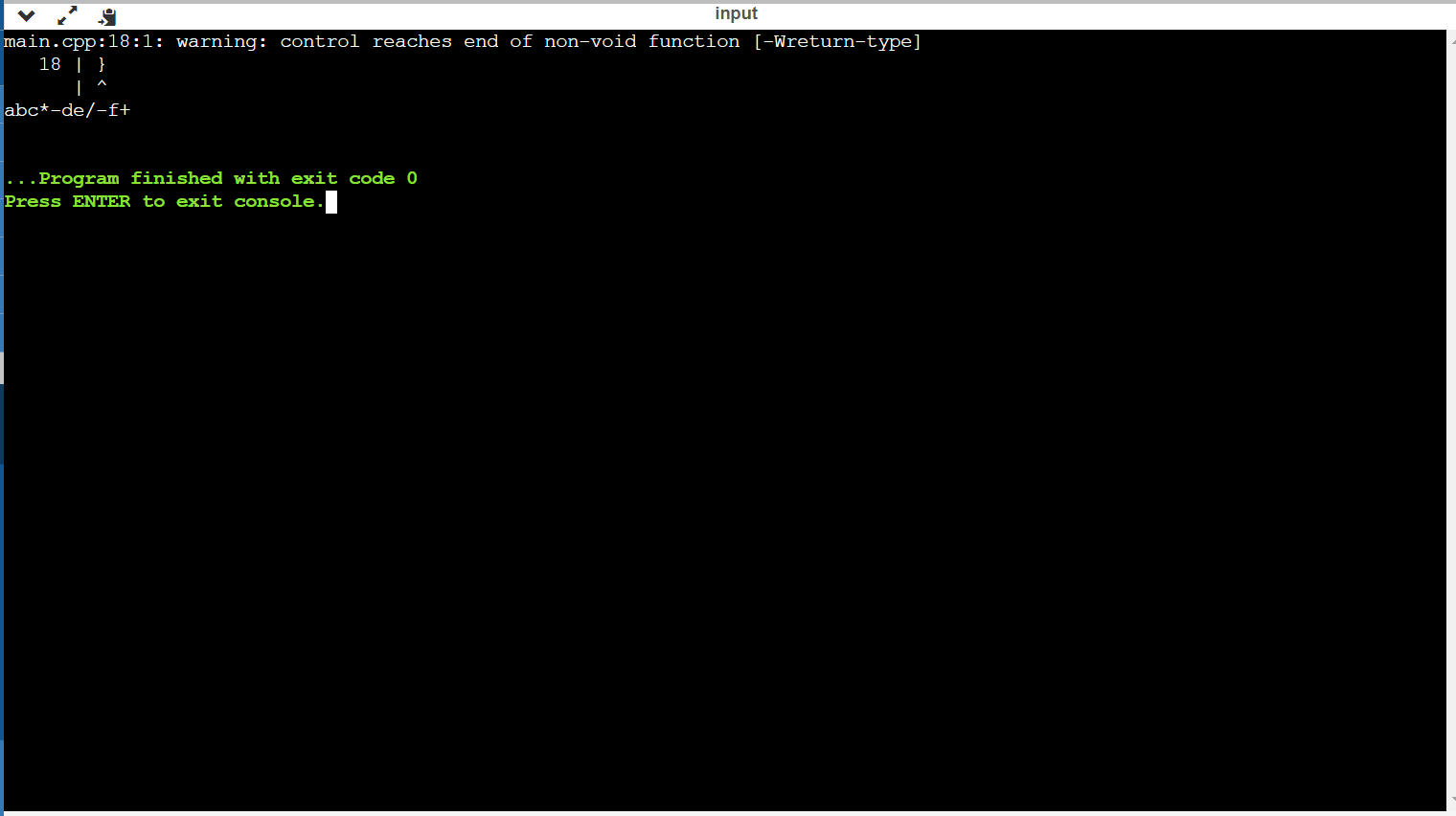
string s = "a-b\*c-d/e+f";

infix\_to\_postfix(s);

return 0;

}

**Output:**

****