

Infix to Postfix

Given an infix expression in the form of string **str**. Convert this infix expression to postfix expression.

- **Infix expression:** The expression of the form a **op** b. When an operator is in-between every pair of operands.
- **Postfix expression:** The expression of the form a b **op**. When an operator is followed for every pair of operands.

Note: The order of precedence is: \wedge **greater than** $*$ **equals to** $/$ **greater than** $+$ **equals to** $-$. Ignore the right associativity of \wedge .

Example 1:

Input: `str = "a+b*(c^d-e)^(f+g*h)-i"`

Output: `abcd^e-fgh*+^*+i-`

Explanation:

After converting the infix expression into postfix expression, the resultant expression will be `abcd^e-fgh*+^*+i-`

Example 2:

Input: `str = "A*(B+C)/D"`

Output: `ABC+*D/`

Explanation:

After converting the infix expression into postfix expression, the resultant expression will be `ABC+*D/`

Your Task:

This is a **function** problem. You only need to complete the function **infixToPostfix()** that takes a **string**(Infix Expression) as a **parameter** and **returns** a **string**(postfix expression).

The **printing** is done **automatically** by the **driver code**.

Expected Time Complexity: $O(|str|)$.

Expected Auxiliary Space: $O(|str|)$.

Constraints:

$1 \leq |str| \leq 10^5$