

## Algorithm : Postfix Using Stack

**Step1:** Insert '(' in the stack.

**Step 2:** Move from Left to Right in the Expression

**Step 2.a:** IF **Operand** Found

Put it on Expression

**Step 2.b:** IF **Operator** Found

Put it on Stack

**Step 2.b.1:** IF **)** found

Remove items on the stack till the ( found and append them on post fix expression

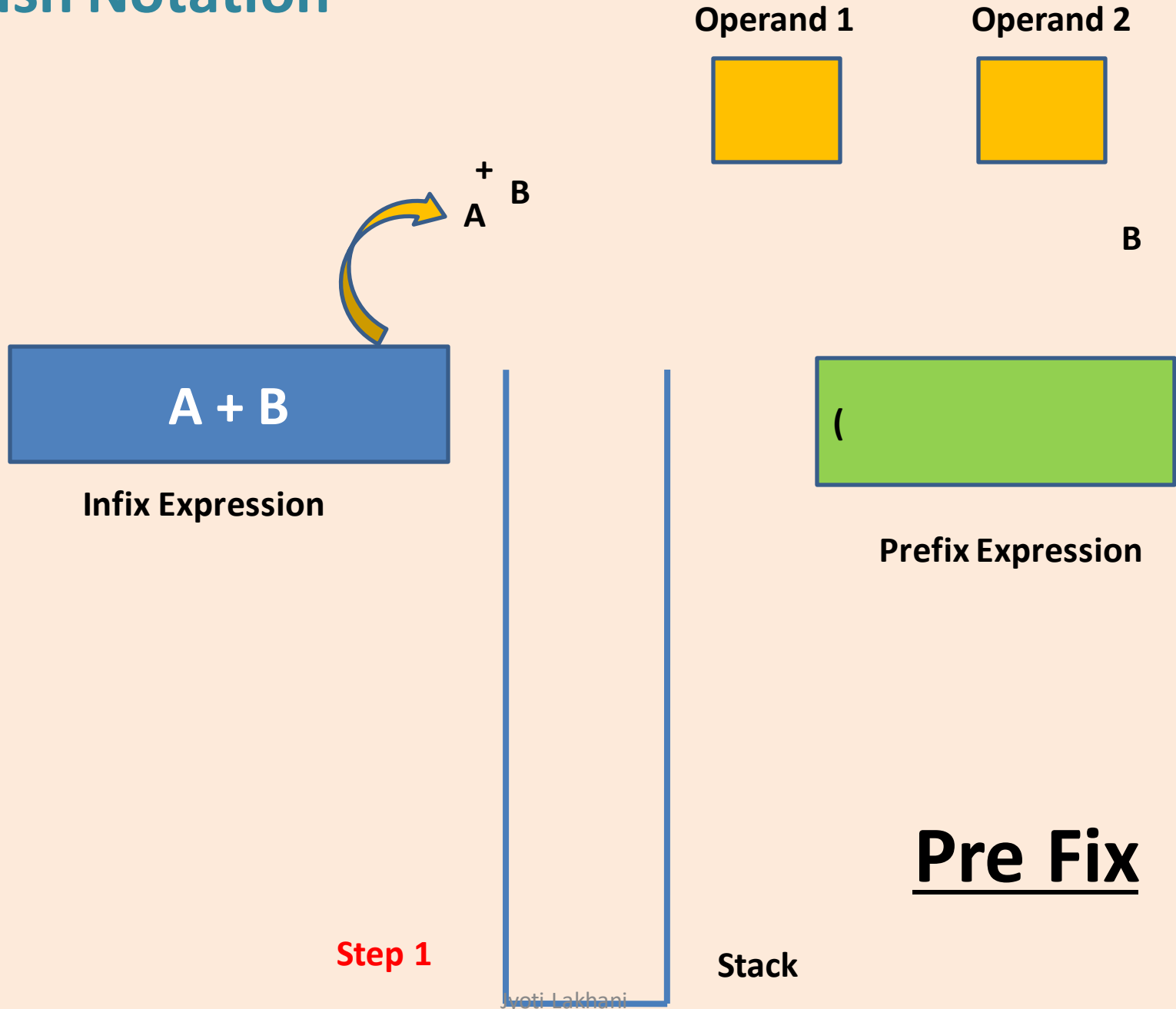
**Step 2.b.1:** IF Operator's precedence is **Higher** than the top operator on the stack

Put it on Stack

**Step 2.b.1:** IF Operator's precedence is **Lower** than the top operator on the stack

Extract all higher precedence operators from the stack and append them on expression

# Polish Notation



# Algorithm : Prefix Using Stack

**Step1:** Insert '(' in the stack.

**Step 2:** Move from Left to Right in the Expression

**Step 2.a:** IF Operand Found

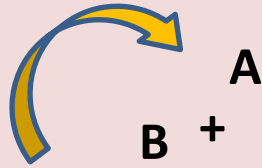
Put it on Stack

**Step 2.b:** IF Operator Found

Put it on Head of the Expression

**Step 2.b.1:** IF ) found

Remove operands from the stack till the ( found and append them on prefix expression



**A + B**

**Infix Notation**

**Prefix Notation**



**Queue**



# **PREFIX Notation with Queue**