http://www.cinstitute.co.in
https://youtube.com/tarunsir
+917742817777

Infix to Prefix Conversion using Stack

1. **Reverse the Infix Expression:**
   - Reverse the given infix expression.
   - Replace (with) and vice versa in the reversed expression.
2. **Convert Reversed Infix to Postfix:**
   - Use the standard **infix to postfix** algorithm (discussed earlier) on the reversed expression.
3. **Reverse the Postfix Expression:**
   - Reverse the resulting postfix expression to get the prefix expression.

Operator Precedence Table

Operator	Precedence
()	1
^	2
*, /, %	3
+, -	4

Example: Infix to Prefix using Stack

Convert: (A + B) * C - D

1. **Reverse the Infix Expression:**
   - Original: (A + B) * C - D
   - Reversed: D - C * (B + A)
2. **Convert Reversed Infix to Postfix:** Use the steps for **infix to postfix** conversion:

Step	Stack	Postfix Expression
Read D		D
Read -	-	D
Read C	-	D C
Read *	- *	D C
Read (	- * (	D C
Read B	- * (	D C B
Read +	- * (+	D C B
Read A	- * (+	D C B A
Read)	- *	D C B A +
Pop Remaining	-	D C B A + *
Pop Remaining		D C B A + * -

3. Resulting Postfix: D C B A + * -
4. **Reverse the Postfix Expression:**
    - Reverse: - * + A B C D