

# **SNS COLLEGE OF ENGINEERING**

**Kurumbapalayam(Po), Coimbatore – 641 107**

**Accredited by NAAC-UGC with 'A' Grade**

**Approved by AICTE, Recognized by UGC & Affiliated to Anna University**

**Department of Artificial Intelligence and Data Science**

**Course Name: 23ITB201 Data structures and Algorithms**

**II Year / III semester**

**Unit II – Stack and Queue ADT**

**Topic: Evaluating Postfix Expressions**

## Rule of a Postfix Expression :

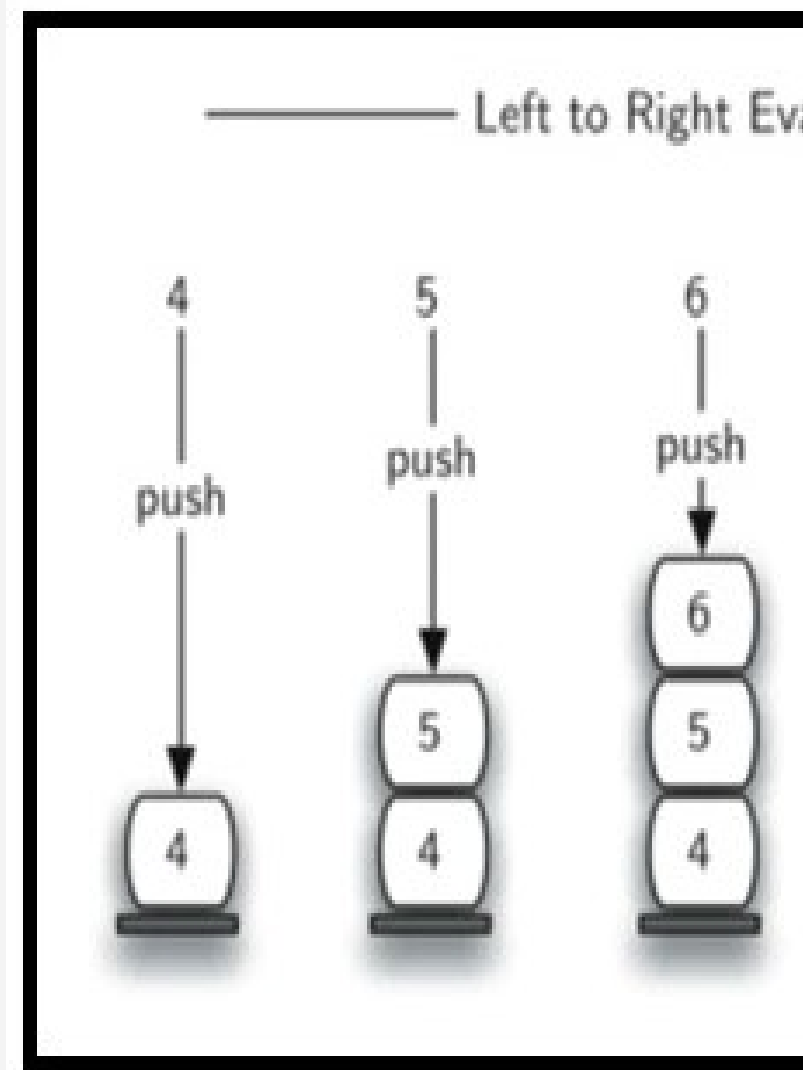
Traverse the expression from left to right, **push** the element in the stack

if the element is an **operands** from the stack, if the element is an **operator and then**

pop the **result of the evaluation**. Repeat it till the end of the expression

: 456\*+

Operation	Stack	Calculation
Push	4	
Push	4,5	
Push	4,5,6	
Pop(2 elements) & Evaluate	4	$5*6=30$
Push result(30)	4,30	
Pop(2 elements) & Evaluate	Empty	$4+30=34$
Push result(34)	34	
Pop-more elements(pop)	Empty	34(Result)



- C - B A + C for A =1, B =2 and C =3

+ \*4 1 5 - /-

+ \* 8 4