

Pseudocode or Algorithm of each stack operation.

PUSH Operation

PUSH (S, TOP, X)

Step – 1: [Check for Stack overflow]

If $TOP \geq N$ then

Write ('Stack Overflow')

Return

Step – 2 : [Increase value of TOP]

$TOP \leftarrow TOP + 1$

Step – 3 : [Insert element into stack]

$S[TOP] \leftarrow X$

Step – 4: [Finished]

Return

POP Operation

POP(S, TOP)

Step – 1: [Check for Stack Underflow]

If $TOP == 0$ then

Write ('Stack Underflow')

Return

Step – 2 : [Decrease value of TOP]

$TOP \leftarrow TOP - 1$

Step – 3 : [Return top element of stack]

Return $S[TOP + 1]$

PEEP Operation

PEEP(S, TOP, i)

Step – 1: [Check for Stack Underflow]

If $TOP - i + 1 < 0$ then

Write ('Stack Underflow For PEEP')

Return

Step – 2 : [Return ith element from top of stack]

Return $S[TOP - i + 1]$

CHANGE Operation

Change(S, TOP, i, X)

Step – 1: [Check for Stack Underflow]

If $TOP - i + 1 < 0$ then

Write ('Stack Underflow on Change')

Return

Step – 2 : [Change ith element from top of stack]

$S[TOP - i + 1] \leftarrow X$

Step – 3 : [Finished]

Return

PUSH : To insert an item into the stack

POP : To remove an item from a stack.

PEEP : To find ith element from stack.

CHANGE : To change ith element from stack.

