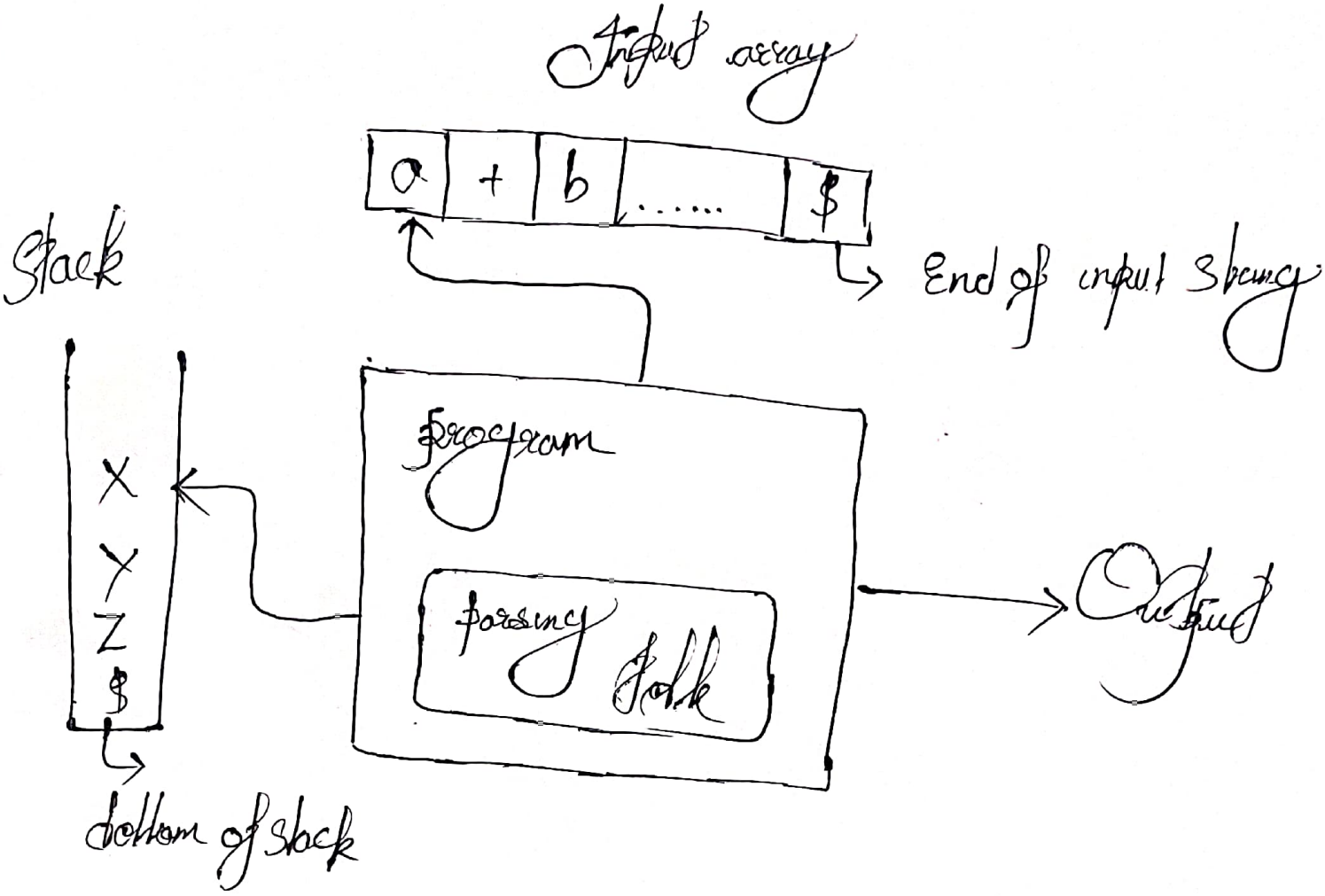
Predictive parsing Structure



Predictive parsing algorithm

Input: 1) Input string 'w'
2) Parsing table M for G

Output: if w is in L(G), then complete LMD of w
else error

Δ Initialise: 1) Insert start symbol of Given Grammar to stack
2) Insert entire input string 'w' to input array

Stack:

$
$

Input array:

a	+	b	... $

Δ Repeat until X = $

begin
let 'X' be the stack top and 'a' as next i/p symbol

① If X is a terminal or $ then
If X = a then
Pop X from stack and remove a from i/p array
else
Error()

② Else // X is a Non terminal
if $M[X, a] = X \longrightarrow Y_1 Y_2 Y_3 \ldots Y_k$ then
Pop x from stack
Push $Y_k Y_{k-1} \ldots Y_2 Y_1$ onto stack // reverse

else!
Error()

end