

- ② Write a program to convert a given valid parenthesized infix arithmetic expression to postfix expression. The expression consists of single character operands and the binary operators $+$, $-$, $*$, $/$.

Convert Infix-Postfix (exp)

{
Create a stack S

for $i = 0$ to $\text{length}(\text{exp}) - 1$

{ if $\text{exp}[i]$ is operand

res = res + $\text{exp}[i]$

else if $\text{exp}[i]$ is operator

while ($!= \text{is.empty}()$ && $\text{HasHigherP}(\text{S.TOP}(), \text{exp}(i))$)

{ res = res + $\text{S.TOP}()$

$\text{S.POP}()$

}

$\text{S.PUSH}(\text{exp}[i])$

else if $\text{isOpeningpar}(\text{exp}[i])$

$\text{S.push}(\text{exp}[i])$

else if $\text{isClosingpar}(\text{exp}[i])$

while ($!= \text{is.empty}()$ && $!= \text{isOpening}(\text{S.TOP}())$)

{ res = res + $\text{S.TOP}()$

$\text{S.POP}()$

}

$\text{S.POP}()$

}

while ($!= \text{is.empty}()$)

{ res = res + $\text{S.TOP}()$

$\text{S.POP}()$

}

return res }