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| **Application/ Program name:** | stackInfix2PostSTLLib |
| **Written by:** | Matthew Carreon |

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| **Purpose or problem definition:** |
| Create an infix to postfix program using the STL stack library. |
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| **Program Procedures:** |
| Create an infixToPostfix variable that will take an input as an String. It will take the string and keep it in post fix. It will use the infix string to create a separate postfix string using an algorithm to determine the postfix string. It will then display the results of the infix and postfix string. |
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| **Algorithm/Processing/Conditions:** |
| **Inputs:** |
| A string is given in the main program where an infix expression is set into a string. |
| **Processes:** |
| In the precedence function, it will use what every symbol is on the top whether what operator. Main processing is done in the convertToPostFix, it inializes the stack, postfix, and finds out the length of the prefix. In a for loop based on the length of the prefix it will check if its symbol which is added to postfix string. It will then check if the symbol is a which the ‘(‘ is then put into the stack. If the symbol is a ‘)’, from the top element in the stack will be added to postfix and removed from the stack. At the end of this process, it will pop the ‘)’ to ensure a clean slate. If the symbol is ‘\*, +, / , -‘ it will add the top element from the stack, pop it, and add the operator to postfix. After it goes through the for loop it will add any remaining elements in the stack to postfix. In the getInfix, it will set the infix expression to the desired string. showInfix and showPostfix displays their respective values. |
| **Outputs:** |
| It will display the postfix and infix expression. |
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| **Notes & Restriction:** |
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| **Comments:** |
| Code was used from L3-2 |