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Assignment 1 – Part (2)

1. **Stackt:**
   * **Stackt [Constructor]:** declares the top node pointer to NULL, meaning the stack is empty.
   * **Stackt [Deconstructor]:** resets the top node to NULL.
   * **Push ():** adds a new node to the top of the stack.
   * **Pop ():** removes a node from the top of the stack and returns the value stored in it.
   * **Peak ():** returns the value stored in the top node without removing it.
   * **IsEmpty ():** returns true if the top node is equal to NULL, meaning the stack is empty.
   * **Display ():** Outputs all the values stored in the stack without moving the top node or affecting the stack in any way.
2. **App:**
   * **Start ():** Takes the Input (infix expression) and feeds that input to the functions GetPostfixStack, Reverse and Show to each do their job in that order.
   * **GetPostfixStack ():** Moves in a loop through the stack and generates a postfix stack that carries the postfix from the provided infix expression and calculates the values of that postfix expression and place the values into the Result stack.
   * **Calculate ():** takes 2 numbers and an operator and a stack to put the result in, to do any of the 4 operations ( ‘+’ , ’-’ , ’\*’ , ’/’ ) on the 2 numbers and push the result into the given stack.
   * **Reverse ():** takes a stack and reverse its order.
   * **Show ():** takes 2 stacks one containing the postfix expression and one containing the result, then it outputs (to the screen) the postfix expression and the final result.