Stack – Study Questions

- What does LIFO mean?
- How is LIFO related to the ordering of the items in a stack? Think about what happens to the data if it is all pushed onto a stack and then popped.
- Describe two applications of a stack data structure.
- Write pseudocode for an algorithm that uses a stack to check if parentheses are balanced given a string as input.
- What is a prefix algebraic expression? What is a postfix algebraic expression?
- How can you use a stack to evaluate a postfix expression? Think about the relationship between stack and postfix.
- Why do we use a stack for backtracking?
- What is the complexity of pop()? push()? top()? size()? isEmpty()?
- Write a C++ implementation of push() in a linked-chain implementation of stack
- Write a C++ implementation of pop() in a linked-chain implementation of stack