

**Pg. 1072 Checkpoints 1-4****18.1** Describe what LIFO means.

Last-In-First-Out. Like a queue, which those British folk should know how to do hereditarily.

**18.2** What is the difference between static and dynamic stacks? What advantages do dynamic stacks have over static stacks?

A static stack is initialized to a specific size and cannot exceed this, whereas a dynamic stack uses a resizable store so it can be resized as it gains or loses elements. A dynamic stack is less error-prone, though it does take more computation (and when backed by an array store will thrash the memory manager more regularly, whereas a list-backed store will fragment the heap space store under load).

**18.3** What are the two primary stack operations? Describe them both.

POP and PUSH. PUSH “pushes” things onto the top of a stack, whereas POP pulls things off the top. To pop removes the element from the stack and returns the value.

**18.4** What STL types does the STL stack container adapt?

- list
- vector
- deque

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**28** A static stack or queue is built around an array. TRUE

**29** The size of a dynamic stack or queue must be known in advance. FALSE

**30** The push operation inserts an element at the end of a stack. FALSE

**31** The pop operation retrieves an element from the top of a stack. TRUE

**32** The STL stack container’s pop operation does not retrieve the top element of the stack, it just removes it. FALSE