In computer science, a stack is an abstract data type that serves as a collection of elements, with two principal operations:

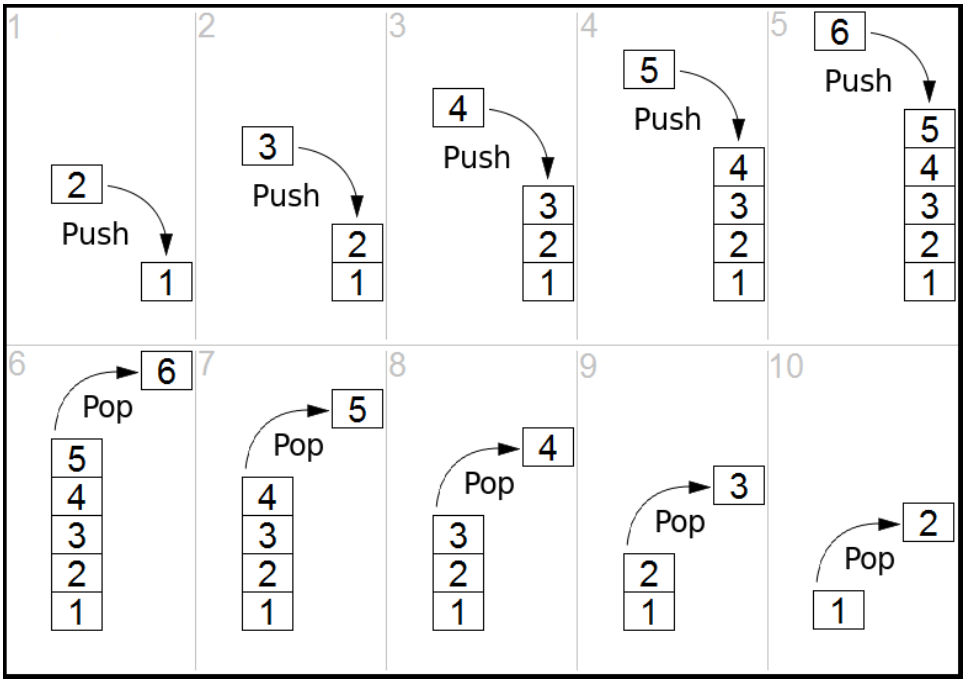
- push, which adds an element to the collection.
- pop, which removes the most recently added element that was not yet removed.

The order in which elements come off a stack gives rise to its alternative name, LIFO (last in, first out).

Additionally, a peek operation may give access to the top without modifying the stack.

Similar to a stack of plates, adding or removing is only possible at the top:

Considered as a linear data structure, or more abstractly a sequential collection, the push and pop operations occur only at one end of the structure, referred to as the top of the stack. This makes it possible to implement a stack as a singly linked list and a pointer to the top element.



Simple representation of a stack runtime with *push* and *pop* operations.

A stack may be implemented to have a bounded capacity. If the stack is full and does not contain enough space to accept an entity to be pushed, the stack is then considered to be in an overflow state.