STACKS OVERVIEW

Stacks Overview

- A stack is an ordered collection of items where the addition of new items and the removal of existing items always takes place at the same end.
- This end is commonly referred to as the “top.”
- The end opposite the top is known as the “base.”

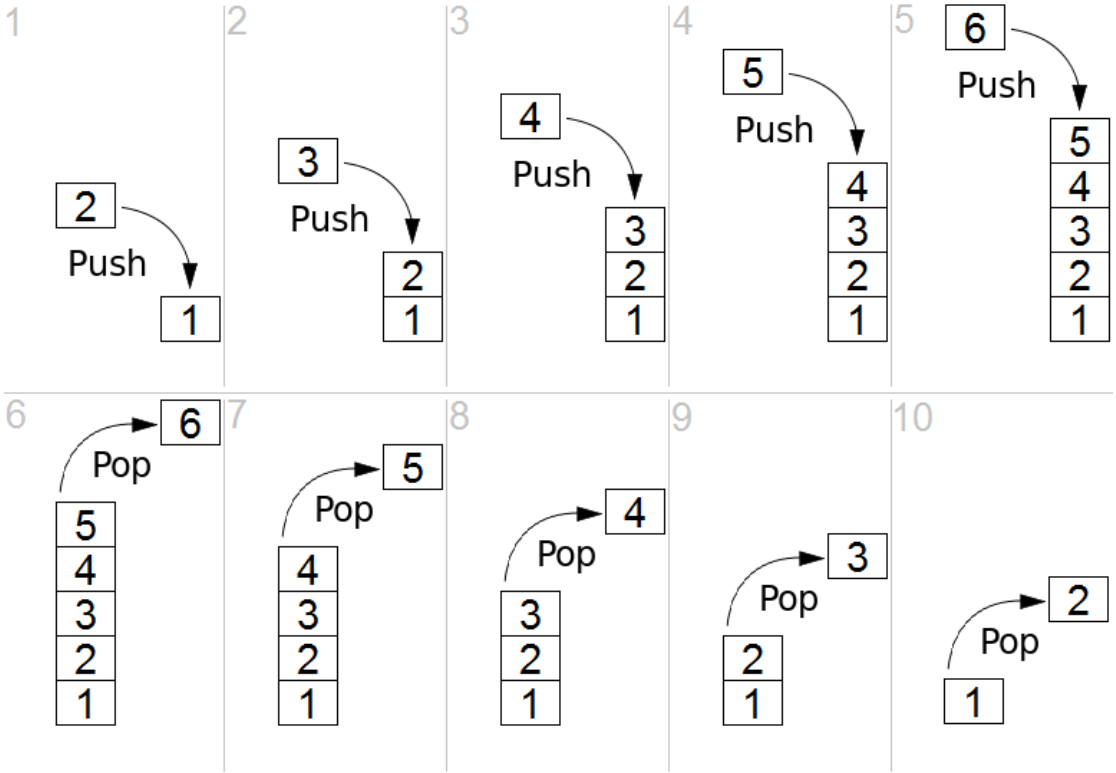
Stacks Overview

- The base of the stack is significant since items stored in the stack that are closer to the base represent those that have been in the stack the longest.
- The most recently added item is the one that is in position to be removed first.

Stacks Overview

- **This ordering principle is sometimes called LIFO, last-in first-out.**
- It provides an ordering based on length of time in the collection.
- Newer items are near the top, while older items are near the base.

Stacks Overview



Stacks Overview

- Note how the first items "pushed" to the stack begin at the base, and as items are "popped" out.
- Stacks are fundamentally important, as they can be used to reverse the order of items.
- The order of insertion is the reverse of the order of removal.

Stacks Overview

- Considering this reversal property, you can perhaps think of examples of stacks that occur as you use your computer.
- For example, every web browser has a Back button.

Stacks Overview

- As you navigate from web page to web page, those pages are placed on a stack (actually it is the URLs that are going on the stack).
- The current page that you are viewing is on the top and the first page you looked at is at the base.
- If you click on the Back button, you begin to move in reverse order through the pages.

Stacks Overview

- Now we are going to implement our on Stack class!