



Introduction to Stacks

What is a Stack?

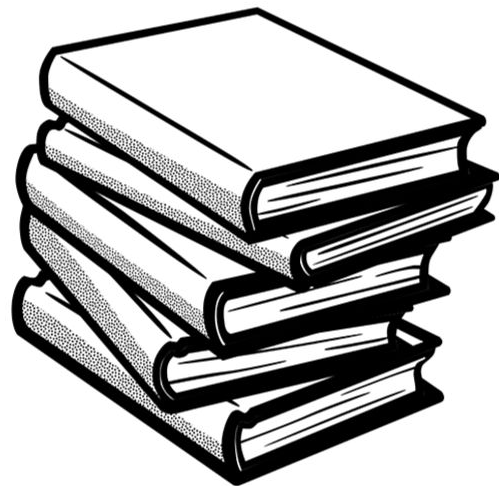
Consider a stack of books:

Add books to the top of the stack

Remove books from the top of the stack

The abstract data type Stack is based on LIFO principle: Last In, First Out

Order of items in Stack is based on the order in which they were added



push() and pop()

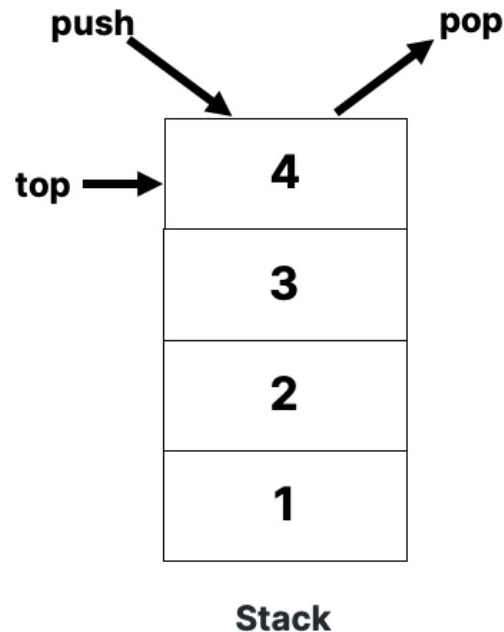
Two main operations (methods) of a Stack

push() adds an item to the top

The last item added to the stack is the “top”

pop() removes the item at the top

Item below removed item becomes “top”





How are stacks useful?

Web browser history

top →

Google.com

Nucamp.co

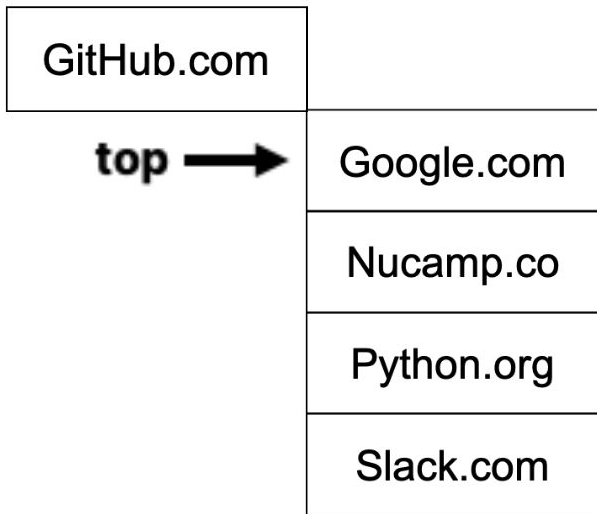
Python.org

Slack.com

How are stacks useful?

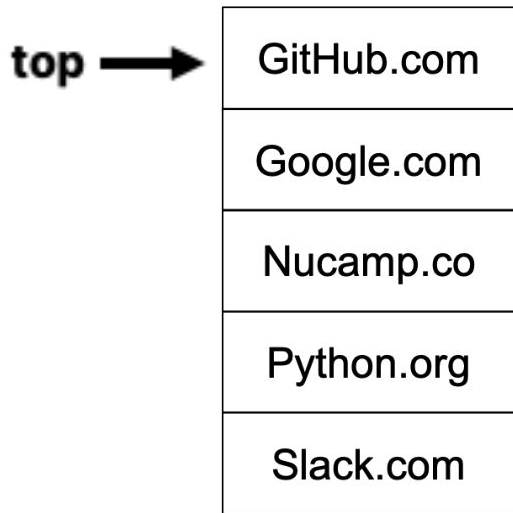
Web browser history

push()



How are stacks useful?

Web browser history





How are stacks useful?

Web browser history

top →

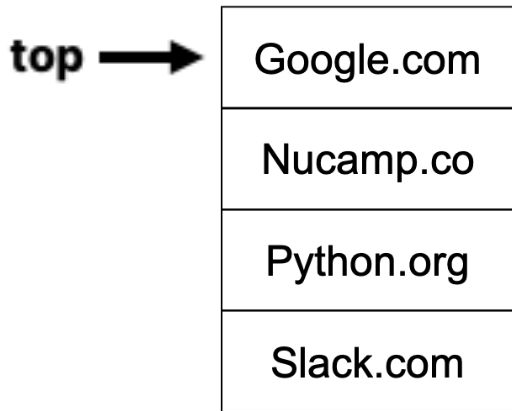


GitHub.com

pop()

How are stacks useful?

Web browser history





How are stacks useful?

Web browser history

Call stack – function calls, especially recursive function calls

Undo and Redo operations