

Stacks

The following data structure is known as a stack:

Top ->	Apple
	Banana
	Cherry
	Donut
	Eggplant
	Fig

1. What item is on top of the stack?

A **push** operation pushes a new item onto the stack top, for example, the operation **push(Almond)** followed by **push(Agave)** modifies the stack as following:

Top ->	Agave
	Almond
	Apple
	Banana
	Cherry
	Donut
	Eggplant
	Fig

2. Assuming you began with an empty stack, what would the stack look like after the following series of push operations?

push(pear)

push(coconut)

push(grape)

push(fudge)

push(onion))

Top ->	

3. The **pop** operation removes and returns the item on top of the stack. What would the **pop()** operation return for the following stack?

Top ->	Agave
	Almond
	Apple
	Banana
	Cherry
	Donut
	Eggplant
	Fig

4. What would the stack appear as following series of push() and pop() operations? (Be sure to indicate the stack top

push(blue)
push(green)
push(yellow)
pop()
push(mauve)
push(orange)
pop()
push(pink)
push(red)
pop()

top ->