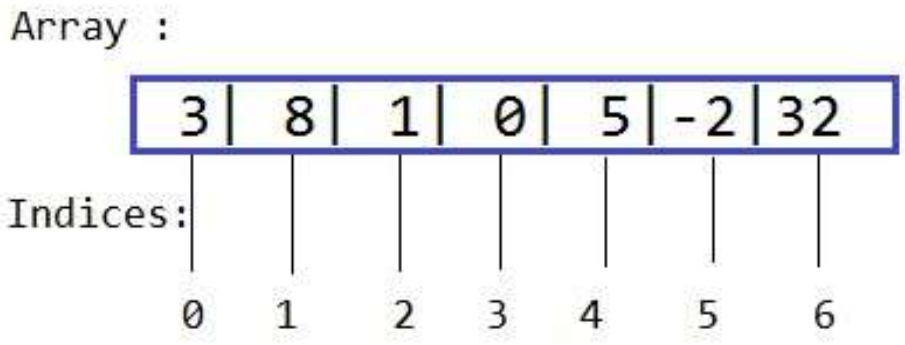
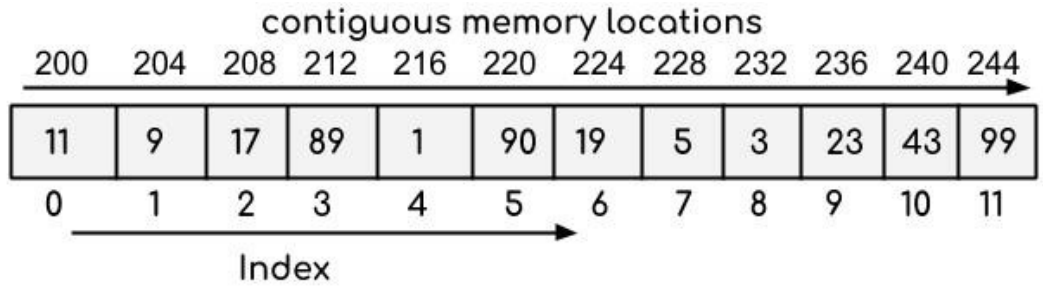
Array: -

- ✓ The length of an array is fixed.
- ✓ An array is a collection of homogeneous (same type) data items.
- ✓ The data items are stored in contiguous memory locations.






```
public class ArrayTraverse {
	public static void main(String[] args) {
		int[] strArray = { 11, 9, 17, 89, 1, 90, 19, 5, 3, 23, 43, 99 };
		for (int i = 0; i < strArray.length; i++) {
			System.out.println(strArray[i]);
		}
	}
}
```

Time Complexity			Time Complexity		
	Array	LinkedList		Array	LinkedList
Insert@End	O(1)	O(n)	Delete@End	O(1)	O(n)
Insert@Begin	O(n)	O(1)	Delete@Begin	O(n)	O(1)

Stacks and Queues:-

Both Stacks and Queues are **Logical data structures.**

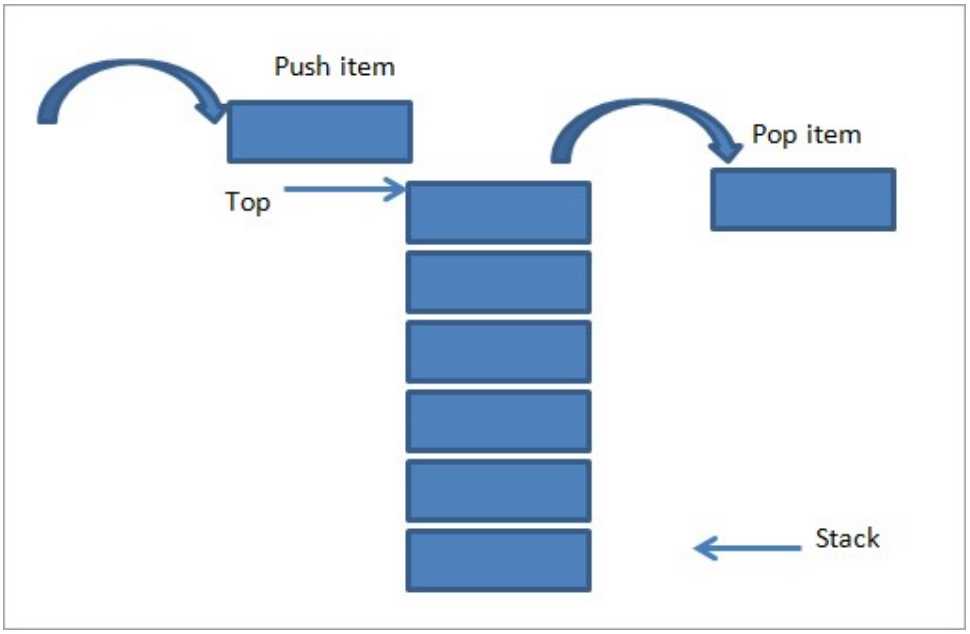
Stack :-

1. Insertion and Deletion happens at one end only, called as **top**.
2. This follows **LIFO** (Last in First Out)
3. It supports two main operations:

a. **push()** => used for insertion on top.

b. **pop()** => used for deletion from top.

4. This can be implemented using arrays and linked lists.



Queue: -

5. Insertion and Deletion happens at two different ends called as **front** and **rear.**
6. This follows **FIFO**(First In First Out)
7. It supports two main operations :

a. **enque()** => used for insertion on top.

b. **deque()** => used for deletion from top.

8. This can be implemented using arrays and linked lists.

Difference between Stack and Queue:-