

# Data Structures with Real-World Examples.

PART-I [STACK & QUEUE]

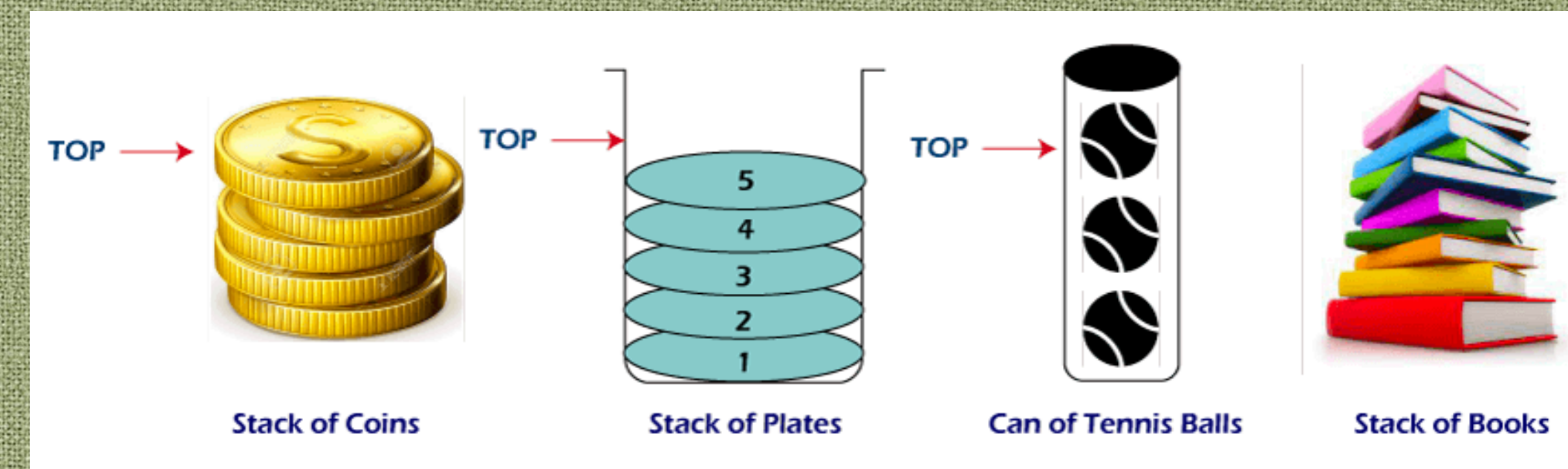
# STACK

## About:

- Stack is a linear data structure to store data, which use LIFO (Last In, First Out) order to add or remove elements.
- This means the last element inserted inside the stack is removed first.
- Insertion and Deletion happens on same end.

## Real-World Simple Examples:

- CD/DVD Stand [CD inserted at the end will be taken out first]
- Women's Bangles
- Books/Clothes piled on top of each other.
- Pile of Plates on top of another.



# STACK

## Real-Life Applications:

- Browsers use stack data structure to keep track of the last visited sites.  
[Since last visited website, always appears on the TOP]
- Call logs in mobiles use stack data structure.[Since last call made, appears on the TOP]
- undo/redo in Excel or Word.

# QUEUE

## About:

- Queue is a linear data structure to store data, which uses FIFO(First In, First Out) order to add or remove elements.
- This means the first element inserted in the Queue will be removed first.
- Insertion and Deletion happens on different end.

## Real-World Simple Examples:

- Single lane one way road(where vehicle enters first, exits first)
- Movie Ticket Counter(First one in the Queue, will get the ticket first)



# QUEUE

## Real-Life Applications:

- Customer Care Systems[use Queue to hold people calling them in an order, until the customer care executive is free to serve us.]
- Process Schedulers:[Process schedulers use queue data structure. In this technique, once an item in queue is processed, the item gets removed and added back to the queue which will in turn gets chance again.]