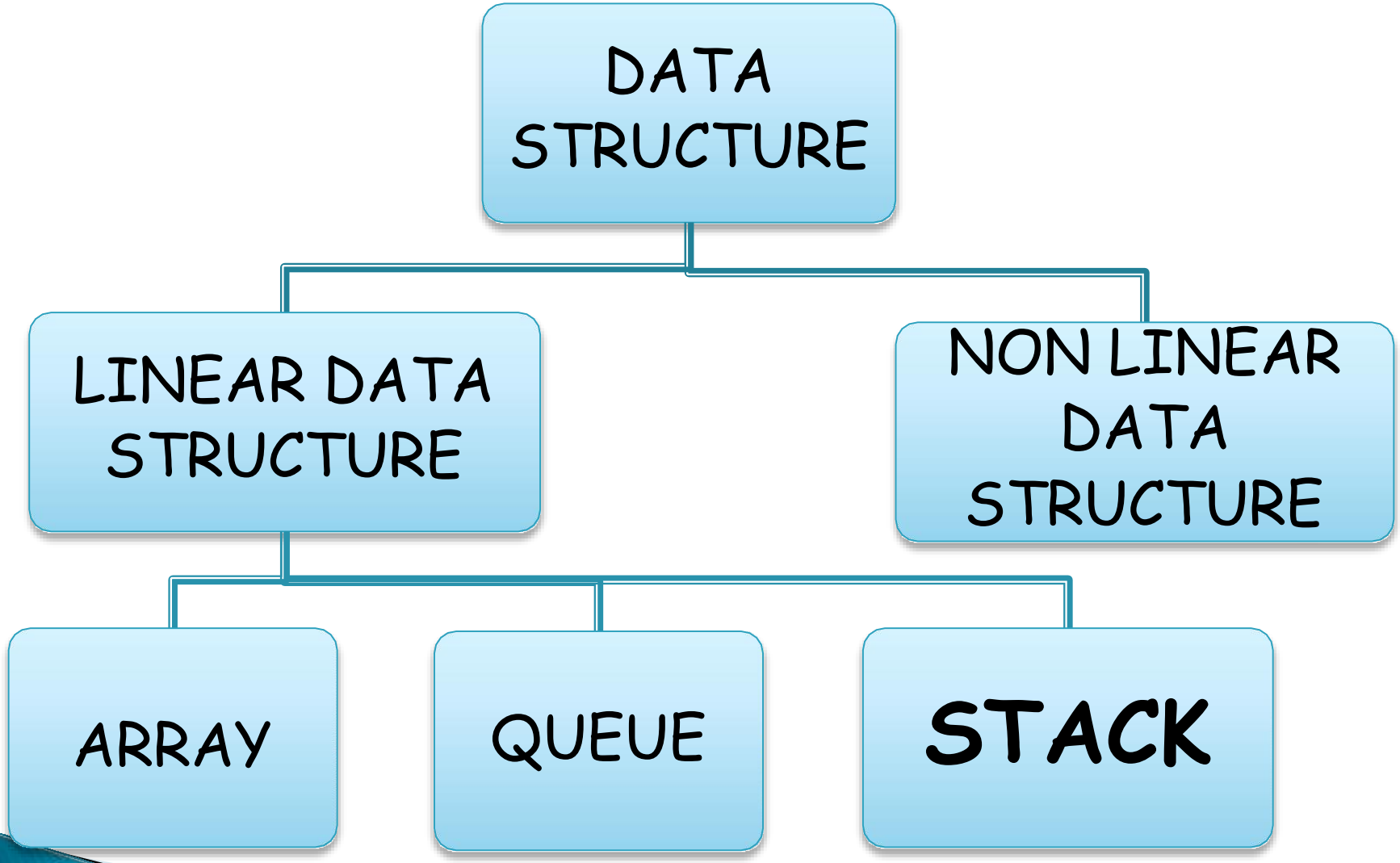
STACK


DATA STRUCTURE
LINEAR DATA STRUCTURE
NON LINEAR DATA STRUCTURE
ARRAY
QUEUE
STACK

What is Linear Data Structure

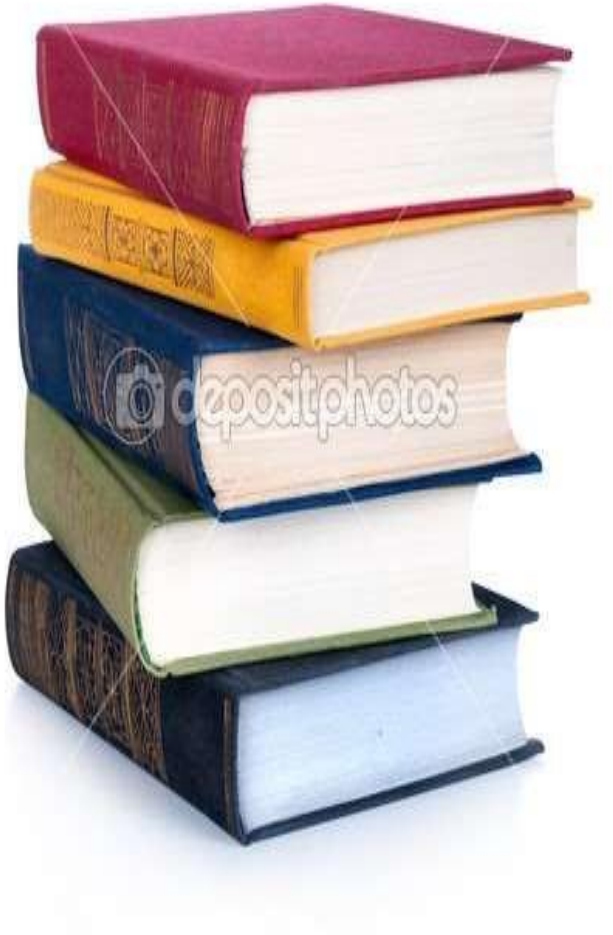
- In linear data structure, data is arranged in linear sequence.
- Data items can be traversed in a single run.
- In linear data structure elements are accessed or placed in contiguous(together in sequence) memory location.

WHAT Is stack

- A stack is called a last-in-first-out (LIFO) collection. This means that the last thing we added (pushed) is the first thing that gets pulled (popped) off.

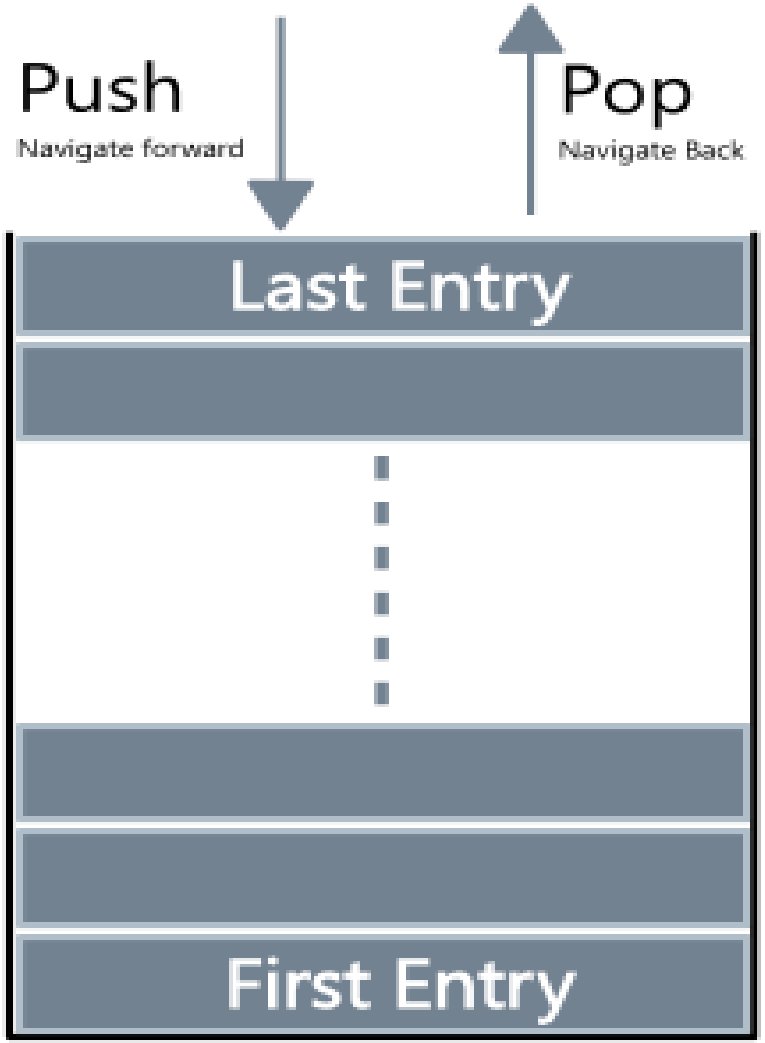
- A stack is a sequence of items that are accessible at only one end of the sequence.

EXAMPLES OF STACK:



Operations that can be performed on STACK:

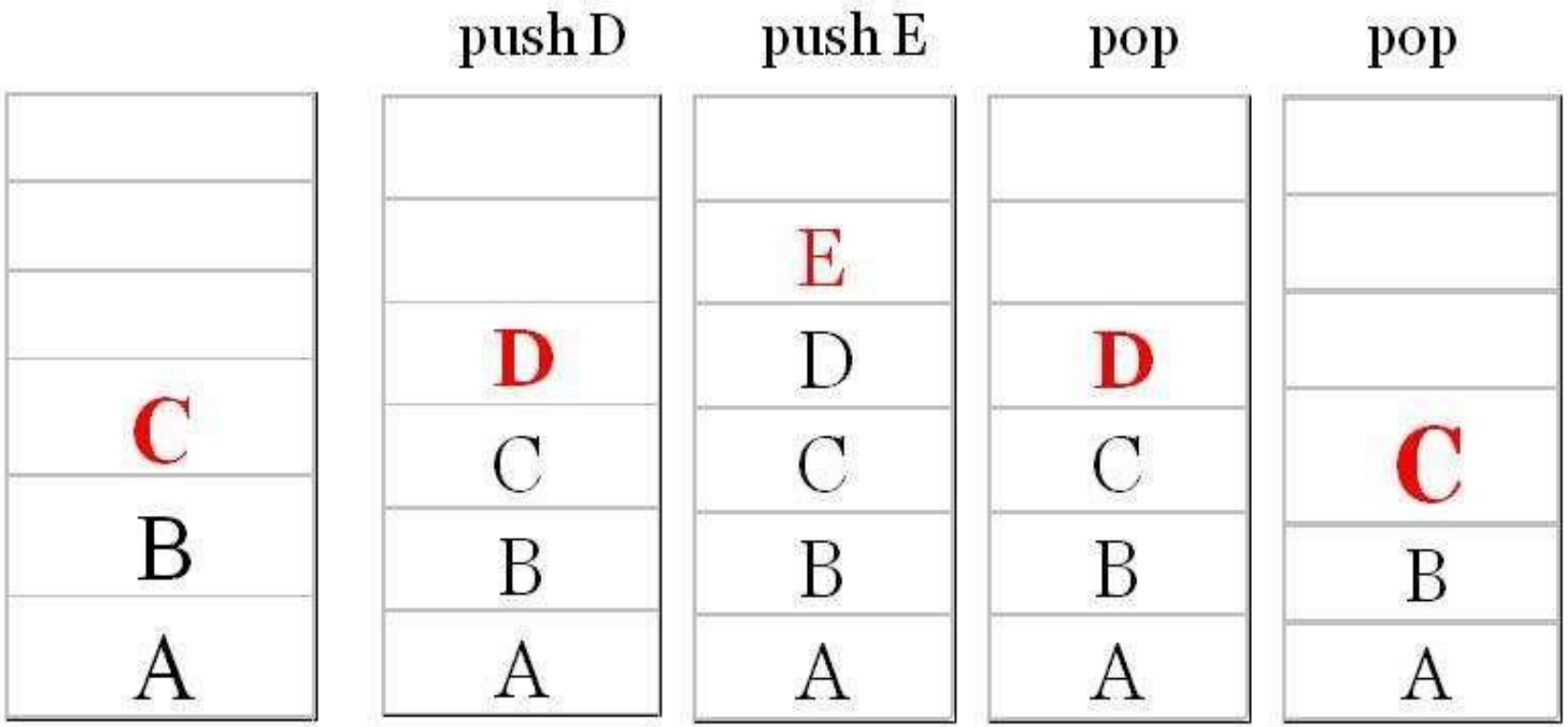
- PUSH.
- POP.



PUSH : It is used to insert items into the stack.

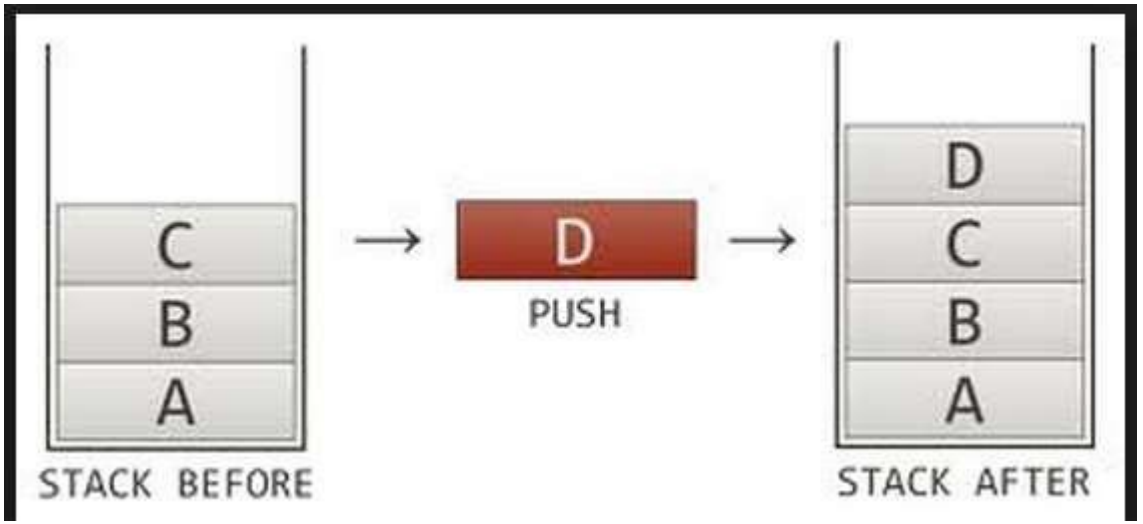
POP: It is used to delete items from stack.

TOP: It represents the current location of data in stack.



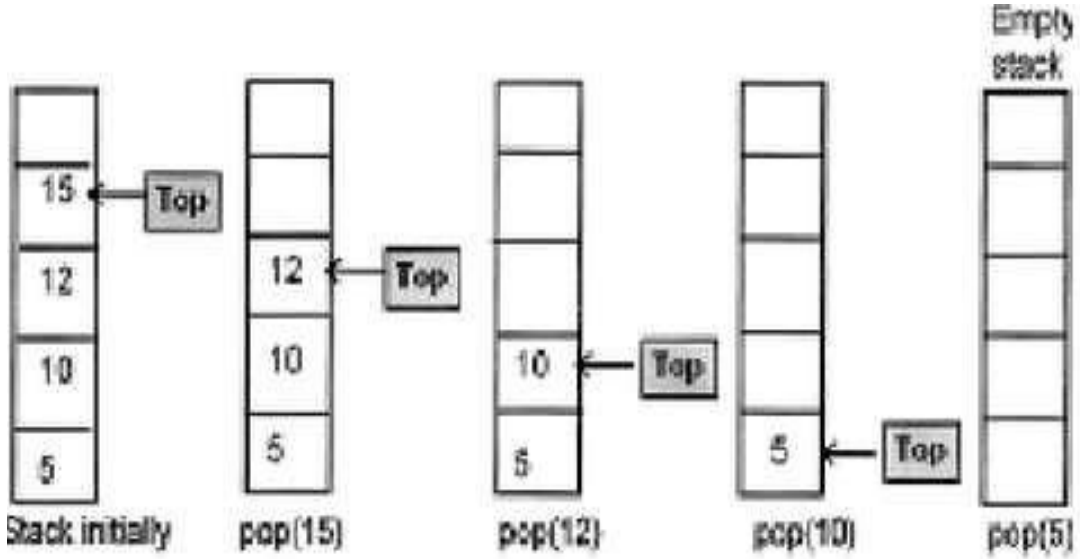
ALGORITHM OF INSERTION IN STACK: (PUSH)

1. Insertion(a,top,item,max)
2. If top=max then
   print 'STACK OVERFLOW'
   exit
   else
3. top=top+1
   end if
4. a[top]=item
5. Exit



ALGORITHM OF DELETION IN STACK: (POP)

1. Deletion(a,top,item)
2. If top=0 then
   print 'STACK UNDERFLOW'
   exit
   else
3. item=a[top]
   end if
4. top=top-1
5. Exit



THANK YOU