STACK
(A very popular LINEAR DATA STRUCTURE)

Before we can learn about STACK let's recall ARRAY:

1. An array is a group of elements

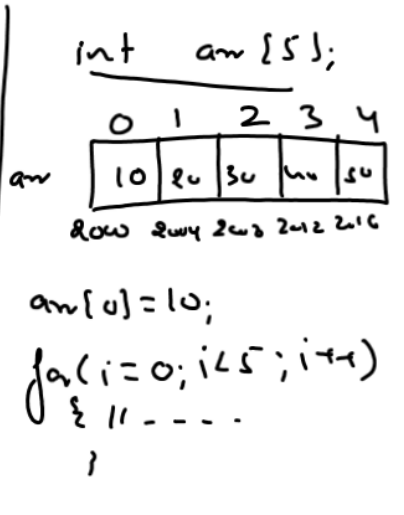
2. Normally , an array is a collection of similar type of data element

3. All array elements are continuously placed.

4. Array elements are accessed via index

5. Array is open from both the ends

6. Array allows random access.



What is a STACK ?

1. Just like an array a STACK is also a group of elements

2. Just like an array a STACK ,is a collection of similar type of data element

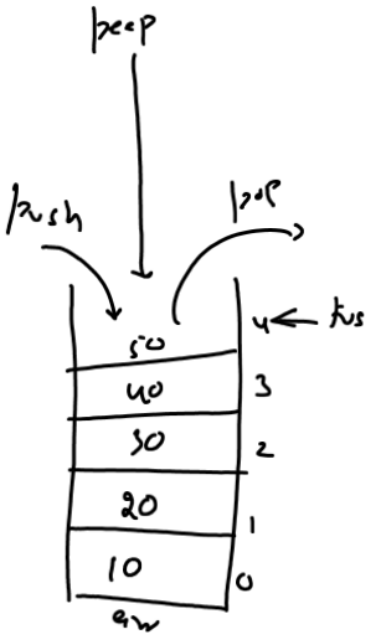
3. All STACK elements are continuously placed.

4. All STACK elements are accessed via index

5. STACK is open from only one end

6. STACK doesn't allows random access, rather it allows ORDERED ACCESS called LIFO(Last In First Out)

7. a: Back Sh . .
   b: Undo



VOCABULARIES/TERMINOLOGIES USED WITH STACK
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1. PUSH: It is the process of INSERTING data in a STACK

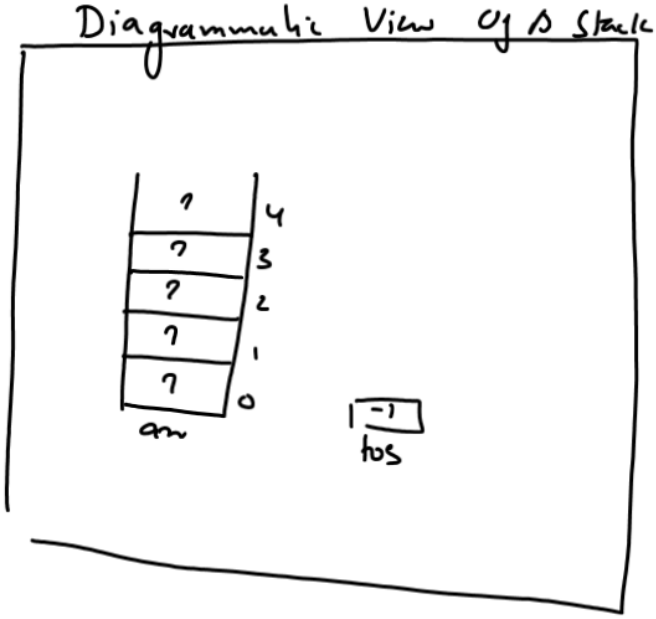
2. POP: It is the process of DELETING data from a STACK

3. PEEP: It is the process of ACCESSING (not deleting) TOP element of the STACK.

4 TOS: It stands for TOP OF STACK and it is a variable of type int used for holding INDEXES of the STACK. Initially we set TOS at -1.

5. OVERFLOW: It is a SITUATION which occurs when we try to PUSH an element in a already FULL STACK

6. UNDERFLOW:It is a SITUATION which occurs when we try to POP an element from an EMPTY STACK



① An empty Stack

-1
tos

② A Stack with 1 element

push(10)