Aim:

Implementation of push, pop, peek, display in stack.

Explanation:

Stack is an important data structure which stores its elements in an ordered manner.
Stack is a linear, last-in first-out (LIFO) data structure in which insertion and deletion of elements are done only at one end, known as TOP of the stack.

Every stack has a variable TOP associated with it, which is used to store the address of the topmost element of the stack.

If TOP = NULL, then it indicates that the stack is empty.

If TOP = MAX-1, then the stack is full.(MAX variable is used to store maximum no. of elements a stack can store.)

Basic operations: Push, Pop, Peep.

Algorithms:

A) Algorithm for insertion

1. IF TOP = MAX-1 then
   PRINT "Over flow"
   Go to step 4
   ENDIF
2. SET TOP = TOP + 1
3. SET STACK [TOP] = VALUE
4. END

B) Algorithm for deletion

1. IF TOP = NULL, then
   PRINT "UNDER FLOW"
   GO TO STEP 4
   ENDIF
2. SET VAL = STACK [TOP]
3. SET TOP = TOP - 1
4. END

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