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SUBJECT – DATA STRUCTURES

BRANCH – B.TECH CSE

SEMESTER – 3RD

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Q.Draw the stack structure in each case when the following operations are performed on an empty stack.

- (a) Add A, B, C, D, E, F
- (b) Delete two letters
- (c). Add G
- (d). Add H
- (e). Delete four letters
- (f). Add I

Answer:

1) Stack is a LIFO (last in first out) data structure where the first element to be inserted (or pushed) is the last element to be deleted (or popped). So, if the stack is initially empty, then the content of the stack after the following operations will be:

(a) Add A, B, C, D, E, F

F
E
D
C
B
A

The elements will be inserted in the stack one after another.

(b) Delete two letters

D
C
B
A

This operation will remove two elements from the top.



(c) Add G

G
D
C
B
A

The element G will be pushed.

(d) Add H

H
G
D

C
B
A

The element H will be pushed.

(e) Delete four letters

B
A

This operation will remove four elements from the top.

(f) Add I

I
B
A

The element I will be pushed.