

STACKS

VIVA QUESTIONS

1. What is a stack? Give some real-life examples.

Stack is a data structure that provides temporary storage of data in such a way that the element stored last will be retrieved first. This method is also called **LIFO – Last In First Out**. In real life we can think of stack as a stack of copies, stack of plates, stack of rotis etc.

2. Which function is used to push an element in stack?

The `append()` function.

3. Which function is used to pop an element in stack?

The `pop()` function

4. Which data structure is used to implement stacks in Python?

List

5. Give applications of stack.

The applications of stack are as follows:

- When a program executes, stack is used to store the return address at time of function call. After the execution of the function is over, return address is popped from stack and control is returned back to the calling function.
- Converting an infix expression to postfix operation and to evaluate the postfix expression.
- Reversing an array, converting decimal number into binary number etc.

6. What do you mean by Overflow and Underflow in the context of stacks?

Overflow: trying to insert more data when the size of the stack has reached its maximum limit.

Underflow: trying to delete more data when the stack is empty.