

1. **Bit Manipulation**

- Binary representation
- Count set bits in an integer
 - Traverse the bits one by one
 - $N \& (N-1)$ method
- Check whether kth bit is set or not
- <https://practice.geeksforgeeks.org/problems/subsets-1587115621/1#>

Stack:

1. Based on the concept of Last In First Out (LIFO).
2. Real-life examples of stacks: simple
3. Major operations in stacks:
 1. **Push**: Add an element to the stack if memory is available
 2. **Pop**: Remove the top element of the stack
 3. **Peek or Top**: Return the top element of the stack
 4. **size()**: returns the size of the stack
 5. **isEmpty**
4. Can be implemented using linked list or arrays:
 1. Arrays are preferred due to less dynamic involvement of memory allocation!
 2. LinkedList is preferred when the maximum possible size is not known
 3. Inbuilt stack functions/classes are safe to use!