Stack

Stack is a linear data structure which follows a particular order in which the operations are performed. The order may be LIFO (Last In First Out) or FILO (First In Last Out)

Time Complexities of operations on stack:
push(), pop(), isEmpty() and peek() all take O(1) time.

Implementation:
There are two ways to implement a stack:

1. Using Array
2. Using Linked List

Applications of stack:

- Balancing of symbols in expressions
- Infix to Postfix / Prefix conversion
- Redo-undo features at many places like editors, photoshop.
- Forward and backward feature in web browsers
- Used in many algorithms like Tower of Hanoi, tree traversals, stock span problem, histogram problem.
- Other applications can be Backtracking, Knight tour problem, rat in a maze, N queen problem and sudoku solver
- In Graph Algorithms like Topological Sorting and Strongly Connected Components