1)

Stack: A stack is an abstract data type based on the Last-In-First-Out (LIFO) principle. It allows adding elements to the top (push) and removing elements from the top (pop), resembling a stack of plates where the last plate added is the first one removed.

2)

Stack Operations:

- Push: Adds an element to the top of the stack.
- Pop: Removes and returns the top element from the stack.
- Peek: Returns the top element without removing it.
- Is Empty: Checks if the stack is empty and returns a Boolean value (true if empty, false if not).
- Size: Returns the number of elements present in the stack.

3)

Examples of Stacks in Real Life:

- Stack of plates in a buffet.
- Call stack in programming languages.
- Stack of books on a table.

4)

Checking if a Stack is Empty: To determine if a stack is empty in a program, the "Is Empty" operation can be used. It returns true if the stack has no elements and is false otherwise. Conditionals, like if-else statements, can be employed in programming languages to handle specific actions based on the stack's empty status.