ALGORITHMS AND DATA STRUCTURES

CS106.3

1. **What is a stack?**
   - Stack is a linear data structure that follows the LIFO principle and allows insertion and deletion operations from one end of the stack data structure, this is top.

2. **Define push, pop, peek, is empty, size in stack.**
   - Push: insert a data item
   - Pop: delete a data item
   - Peek: reading top value at the stack
   - Is empty: check for empty stack/full stack
   - Size: the number of items present in a stack at a particular instance

3. **Give 7 examples of stacks found in real life.**
   - A stack of books on a bookshelf
   - A stack of papers on a desk
   - A stack of money in a cash register
   - A stack of boxes in a warehouse
   - A stack of tires in a garage
   - A stack of logs for a fireplace
   - A stack of bricks on a building construction