Lab Task:

1. 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).

   Mainly the following four basic operations are performed in the stack:

   a. **Push**: Adds an item in the stack. If the stack is full, then it is said to be an Overflow condition.
   b. **Pop**: Removes an item from the stack. The items are popped in the reversed order in which they are pushed. If the stack is empty, then it is said to be an Underflow condition.
   c. **Peek or Top**: Returns top element of stack.
   d. **isEmpty**: Returns true if stack is empty, else false.

   Implement a stack of Integer values. You can define the size of a stack in the code (#define MAX 10;). (NB: Implement it using object oriented approach)

Home Assignment:

1. Implement a method named **merge (**Stack s**)** which will take a stack as an input and merge it with the corresponding stack. You must maintain the overflow condition (merge until the corresponding stack is not overflowed).
   Example: Let us say, your stack1 is containing 1 2 3 4
   Your stack2 is containing 5 6 7 8
   After merging stack2 to stack1, the state of stack1 will be 1 2 3 4 8 7 6 5