**StackUsingQueues**

**Q:** Given a queue data structure with the standard functions like add() and remove() to push and pop the elements repectively. Using this data structure implement the stacks.

**HINT:** Queue follows FIFO (First In First Out function), hence use two queues.

**Algorithm:**

* push( ): **If** q is empty than push the element onto it

**else,** remove all the elements from q one by one and add these elements in the temporary queue temp,

add element to queue q after it becomes empty,

enqueue the elements back to q from temp.

* pop( ): Call the remove( ) function on the queue

**Example:**

Let the initially state of the q be: 1 2 3 4

* When push( ) is called, remove one-by-one all the values from the queue and push it to a temporary queue, temp.
* Push the new element 5 to the queue q and then add all the elements back to q from temp.
* Stack will look something like: 1 2 3 4 5
* When pop( ) is called 5 will be removed due to the queue's FIFO principle. And according to the stack it should be removed coz it was the last element to be inserted.