

Sort a stack

Given a stack, the task is to sort it such that the top of the stack has the greatest element.

Example 1:

Input: Stack: 3 2 1

Output: 3 2 1

Example 2:

Input: Stack: 11 2 32 3 41

Output: 41 32 11 3 2

****Your Task: ****

You don't have to read input or print anything. Your task is to complete the function ****sort() **** which sorts the elements present in the given stack. (The sorted stack is printed by the driver's code by popping the elements of the stack.)

Expected Time Complexity : $O(N*N)$

Expected Auxilliary Space : $O(N)$ recursive.

```
def sorted(s):  
    # Code here  
    temp = []  
    ans = []  
    while len(s)>0:  
        val = s.pop()  
        if not ans:  
            ans.append(val)  
        elif val > ans[-1]:  
            ans.append(val)  
        elif val<=ans[-1]:  
            while len(ans) and val<=ans[-1]:  
                tempVal = ans.pop()  
                temp.append(tempVal)  
            ans.append(val)  
            while temp:  
                ans.append(temp.pop())  
    for i in range(len(ans)-1,-1,-1):  
        s.append(ans[i])
```

