

# 堆排序

<https://github.com/sangjianshun/Master-School/blob/master/heapSort.py>



问题描述

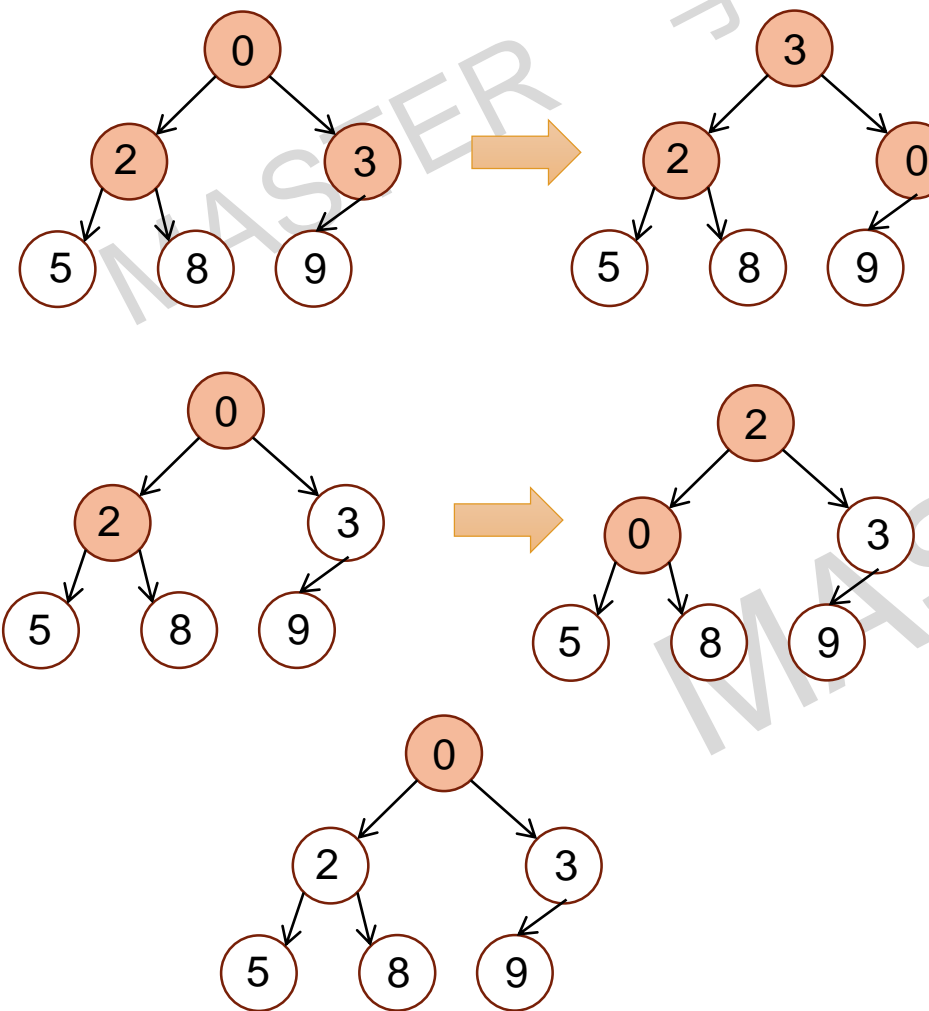




# 堆排序



问题求解：堆排序



```
def swap_param(L, i, j):  
    L[i], L[j] = L[j], L[i]  
    return L  
  
def heap_sort_my(List):  
    length = len(List)-1  
    for i in range(int(length/2)):  
        heap_adjust_my(List, start = int(length/2) - i, end = length)  
    for i in range(1, len(List)):  
        List = swap_param(List, 1, length + 1 - i)  
        heap_adjust_my(List, start=1, end=length-i)  
    return List  
  
def heap_adjust_my(List, start, end):  
    i = start  
    j = 2*start  
    tmp = List[i]  
  
    while j <= end:  
        if j < end and List[j] < List[j+1]: #这一步很微妙  
            j += 1  
        if tmp < List[j]:  
            List[i] = List[j]  
            i = j
```