# Airbnb phone interview round  
## Palindrome pairs (9)  
  
## menu combination (5)  
leetcode 39, instead of using float, using double instead.  
注意double精度问题.  
to avoid double problem, we can multiple all the float number with a large number.  
  
## Implement Queue with Fixed size array (4)  
  
## 2d iterator (4)  
  
leetcode 251, with removeNext method.  
for more.  
## 9 wizard (3)  
  
classic problem dijikstra  
print path  
  
## Review Edit (3)  
  
```  
Input:  
review="I booked a house on Airbnb for my trip to San Francisco. It was a lovely experience."  
map={"Airbnb": "business", "san francisco": "city"}  
  
Output:  
"I booked a house on [business]{Airbnb} for my trip to [city]{San Francisco}. It was a lovely experience."  
  
大概题意是这样，对字符串进行处理。  
我一上来想的比较简单，说去loop map，在review里面找key并进行替换。国人小哥提示有种情况，某个value可能也是key，比如说{"business": "industry"}, 如果先替换Airbnb，那就会替换出错。这题感觉需要想到的情况挺多的，我现在能想到的1. 大小写的问题 2. 如果map里有{"san francisco": "city", "francisco": "name"}.  
  
希望大家也讨论下还有什么corner cases。  
```  
  
```  
比方说输入文字是 "I travel to San Francisco" 字典是 {"San Francisco": "City"} 输出是"I travel to [San Francisco](City)".   
  
跟进问题:-  
1. 如果替换是大小写不敏感的怎么办 比方说字典是 {"san francisco": "City"}  
2. 如果替换有多种可能怎么没办 比方说字典是 {"San Francisco": "City"， "San": "City", "Francisco": "City"}  
3. 如果标签本身也是关键字怎么办 比方说字典是 {"San Francisco": "City", "City": "Location"}  
```  
  
  
## Lowest Common Ancestor (2)  
给一些list of regions, 每个list开头的region包含了list中其他的regions  
除了每个list开头的region最大这一条件以外，各个list之间的顺序，list中其他region的顺序都不确定.  
["Earth", "North America", "South America"]  
["North America", "United States", "Canada"]  
["United States", "New York", "Boston"]  
["Canada", "Ontario", "Quebec"]  
["South America", "Brazil"]  
  
在此基础上，给出两个region， 让找出包含这两个region的最小region，例如：  
["Quebec", "New York"] -> "North America".   
["Canada", "South America"] -> "Earth"  
["Canada", "Quebec"] -> "Canada" (这是LZ特地跟小哥clarify的例子，一开始未给出)  
  
其实就是Lowest Common Ancester的变种，只是存在多个subtree，而且需要自己处理input建树/图  
  
需要自己找root. parent node, and in-degree is 0.  
  
  
## Text Justification (2)  
  
text input is json.  
跟leetcode相比空格加在每行后面  
  
## Round price (2)  
  
## Find out the cheapest flights within K stops (1)  
  
## employee free time(1)  
有开始时间和结束时间  
  
## smallest node to traverse the entire graph (1)  
  
## CollatzConjecture (1).  
  
老题： CollatzConjecture。 从 1 到 1 million， 找出longest step 的数。关键字：million， 肯定不能用递归（会Stack Overflow， 还有就是要用 map去做memory。