

599. Minimum Index Sum of Two Lists

This question is quite easy. We only need to iterate through list1 and use a map to store every restaurant's name. Then we will iterate through list2, check whether the restaurant is in map. If it's there, we will compare $\text{ind} + \text{map}[r]$ with min_ind . In the end, we will get what we want. TC is $O(1)$.

```
def find_restaurant(list1, list2)
  memo = {}
  min_ind = 2 ** 31
  result = []

  list1.each_with_index do |r, ind|
    memo[r] = ind
  end

  list2.each_with_index do |r, ind|
    if memo[r]
      if memo[r] + ind < min_ind
        result = [r]
        min_ind = memo[r] + ind
      elsif memo[r] + ind == min_ind
        result.push(r)
      end
    end
  end

  result
end
```

347. Top K Frequent Elements

This question is quite easy. Nothing to say. $O(n \log n)$ n is number of unique number.

```
def top_k_frequent(nums, k)
  memo = Hash.new(0)
  result = []
  nums.each do |num|
    memo[num] += 1
  end

  memo.sort_by { |_, v| -v }.map { |a| a[0] }[0, k]
end
```

692. Top K Frequent Words

Nothing to say. Quite similar to the previous one.

```

def top_k_frequent(words, k)
  memo = Hash.new(0)

  words.each do |w|
    memo[w] += 1
  end

  memo.keys().sort do |a, b|
    temp = memo[b] <=> memo[a]
    if temp == 0
      a <=> b
    else
      temp
    end
  end[0, k]
end

```

332. Reconstruct Itinerary

Use other ways which is pretty cool.

```

def find_itinerary(tickets)
  memo = Hash.new({})
  visited = Hash.new(false)

  tickets = tickets.sort.reverse.group_by(&:first)
  puts tickets
  route, stack = [], ['JFK']
  while !stack.empty?
    stack.push tickets[stack[-1]].pop()[1] while (tickets[stack[-1]] || []).any?
    route << stack.pop()
  end
  route.reverse
End

```

104. Maximum Depth of Binary Tree

Quite simple, nothing to say. $O(\text{depth})$.

```

def max_depth(root)
  left = 0
  right = 0

```

```
if root
  left = max_depth(root.left)
  right = max_depth(root.right)
else
  return 0
end
return [left, right].max + 1
end
```