2020-05-30 - Handout – String Algorithms (Part 2)

# Q1. Sort Characters By Frequency

Link: <https://leetcode.com/problems/sort-characters-by-frequency/>

Given a string, sort it in decreasing order based on the frequency of characters.

**Example 1:**

**Input:**

"tree"

**Output:**

"eert"

**Explanation:**

'e' appears twice while 'r' and 't' both appear once.

So 'e' must appear before both 'r' and 't'. Therefore "eetr" is also a valid answer.

**Example 2:**

**Input:**

"cccaaa"

**Output:**

"cccaaa"

**Explanation:**

Both 'c' and 'a' appear three times, so "aaaccc" is also a valid answer.

Note that "cacaca" is incorrect, as the same characters must be together.

# Q2. Maximum Length of a Concatenated String with Unique Characters

Link: <https://leetcode.com/problems/maximum-length-of-a-concatenated-string-with-unique-characters/>

Given an array of strings arr. String s is a concatenation of a sub-sequence of arr which have **unique characters**.

Return *the maximum possible length* of s.

**Example 1:**

**Input:** arr = ["un","iq","ue"]

**Output:** 4

**Explanation:** All possible concatenations are "","un","iq","ue","uniq" and "ique".

Maximum length is 4.

**Example 2:**

**Input:** arr = ["cha","r","act","ers"]

**Output:** 6

**Explanation:** Possible solutions are "chaers" and "acters".

**Q3.Integer to English Words**

Link: <https://leetcode.com/problems/integer-to-english-words/>

Convert a non-negative integer to its english words representation. Given input is guaranteed to be less than 2^31 - 1.

**Example 1:**

**Input:** 123

**Output:** "One Hundred Twenty Three"

**Example 2:**

**Input:** 12345

**Output:** "Twelve Thousand Three Hundred Forty Five"

**Example 3:**

**Input:** 1234567

**Output:** "One Million Two Hundred Thirty Four Thousand Five Hundred Sixty Seven"