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"
```