

468. Validate IP Address

Description

Given a string `queryIP`, return `"IPv4"` if IP is a valid IPv4 address, `"IPv6"` if IP is a valid IPv6 address or `"Neither"` if IP is not a correct IP of any type.

A **valid IPv4** address is an IP in the form `"x1.x2.x3.x4"` where `0 <= xi <= 255` and `xi` **cannot contain** leading zeros. For example, `"192.168.1.1"` and `"192.168.1.0"` are valid IPv4 addresses while `"192.168.01.1"`, `"192.168.1.00"`, and `"192.168@1.1"` are invalid IPv4 addresses.

A **valid IPv6** address is an IP in the form `"x1:x2:x3:x4:x5:x6:x7:x8"` where:

- `1 <= xi.length <= 4`
- `xi` is a **hexadecimal string** which may contain digits, lowercase English letter (`'a'` to `'f'`) and upper-case English letters (`'A'` to `'F'`).
- Leading zeros are allowed in `xi`.

For example, `"2001:0db8:85a3:0000:0000:8a2e:0370:7334"` and `"2001:db8:85a3:0:0:8A2E:0370:7334"` are valid IPv6 addresses, while `"2001:0db8:85a3::8A2E:037j:7334"` and `"02001:0db8:85a3:0000:0000:8a2e:0370:7334"` are invalid IPv6 addresses.

Example 1:

Input: `queryIP = "172.16.254.1"`
Output: `"IPv4"`
Explanation: This is a valid IPv4 address, return `"IPv4"`.

Example 2:

Input: `queryIP = "2001:0db8:85a3:0:0:8A2E:0370:7334"`
Output: `"IPv6"`
Explanation: This is a valid IPv6 address, return `"IPv6"`.

Example 3:

Input: `queryIP = "256.256.256.256"`
Output: `"Neither"`
Explanation: This is neither a IPv4 address nor a IPv6 address.

Constraints:

- `queryIP` consists only of English letters, digits and the characters `'.'` and `':'`.

