Note: This is a companion problem to the [System Design](https://leetcode.com/discuss/interview-question/system-design/) problem: [Design TinyURL](https://leetcode.com/discuss/interview-question/124658/Design-a-URL-Shortener-(-TinyURL-)-System/).

TinyURL is a URL shortening service where you enter a URL such as https://leetcode.com/problems/design-tinyurl and it returns a short URL such as http://tinyurl.com/4e9iAk.

Design the encode and decode methods for the TinyURL service. There is no restriction on how your encode/decode algorithm should work. You just need to ensure that a URL can be encoded to a tiny URL and the tiny URL can be decoded to the original URL.