

535. Encode and Decode TinyURL

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 a class to encode a URL and decode a tiny URL.

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.

Implement the `Solution` class:

- `Solution()` Initializes the object of the system.
- `String encode(String longUrl)` Returns a tiny URL for the given `longUrl`.
- `String decode(String shortUrl)` Returns the original long URL for the given `shortUrl`. It is guaranteed that the given `shortUrl` was encoded by the same object.

Example 1:

Input: `url = "https://leetcode.com/problems/design-tinyurl"`

Output: `"https://leetcode.com/problems/design-tinyurl"`

Explanation:

```
Solution obj = new Solution();
```

```
string tiny = obj.encode(url); // returns the encoded tiny url.
```

```
string ans = obj.decode(tiny); // returns the original url after decoding it.
```

```
import random, string
```

```
class Codec:
```

```
    def __init__(self):
```

```
        self.url_pair = {}
```

```
    def encode(self, longUrl: str) -> str:
```

```
        """Encodes a URL to a shortened URL.
```

```
        """
```

```
        suffix = string.ascii_letters + string.digits
```

```
        tiny = "http://tinyurl.com/" + ''.join(random.choice(suffix) for _
```

```
in range(6))
```

```
        # randomSuffix = self.generateRandomString()
```

```
        # tiny = 'http://' + 'tinyurl.com' + '/' + randomSuffix
```

```
        self.url_pair[tiny] = longUrl
```

```
# print(randomSuffix)
return tiny

def decode(self, shortUrl: str) -> str:
    """Decodes a shortened URL to its original URL.
    """
    return self.url_pair[shortUrl]
```

Just know about random and string libs.