

271. Encode and Decode Strings Premium

Medium Topics leet

Design an algorithm to encode a **list of strings** to a **string**. The encoded string is then sent over the network and is decoded back to the original list of strings.

Machine 1 (sender) has the function:

```
string encode(vector<string> strs) {
    // ... your code
    return encoded_string;
}
```

Machine 2 (receiver) has the function:

```
vector<string> decode(string s) {
    //... your code
    return strs;
}
```

So Machine 1 does:

```
string encoded_string = encode(strs);
```

and Machine 2 does:

```
vector<string> strs2 = decode(encoded_string);
```

`strs2` in Machine 2 should be the same as `strs` in Machine 1.

Implement the `encode` and `decode` methods.

You are not allowed to solve the problem using any `serialize` methods (such as `eval`).

Example 1:

Input: dummy_input = ["Hello", "World"]

Output: ["Hello", "World"]

Explanation:

Machine 1:

```
Codec encoder = new Codec();
String msg = encoder.encode(strs);
Machine 1 ---msg---> Machine 2
```

Machine 2:

```
Codec decoder = new Codec();
String[] strs = decoder.decode(msg);
```

Example 2:

Input: dummy_input = [""]

Output: [""]

Constraints:

- $1 \leq \text{strs.length} \leq 200$
- $0 \leq \text{strs}[i].length \leq 200$

- `strs[i]` contains any possible characters out of 256 valid ASCII characters.

Follow up: Could you write a generalized algorithm to work on any possible set of characters?

Seen this question in a real interview before? 1/5

Yes No

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Topics



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