Strings

Strings

A string is actually an array of unicode characters. You can perform almost all the operations we used in an array.

But there are some differences.

Declarations and Initialization of Strings

initialization by raw string

```
string str1("first string");
```

initialization by another string

```
string str2(str1);
```

initialization by character with number of occurence

```
string str3(5, '#');
```

initialization by part of another string

```
string str4(str1, 6, 6); // from 6th index (second parameter)

                         // 6 characters (third parameter)
```

initialization by part of another string : iterator version

```
string str5(str2.begin(), str2.begin() + 5);
```

assignment operator

```
string str6 = str4;
```

clear function deletes all character from string

```
str4.clear();
```

both size() and length() return length of string and

they work as synonyms

```
int len = str6.length(); // Same as "len = str6.size();"
```

Operations on Strings

```
strcpy(s1, s2);
```

Copies string s2 into string s1.

2

```
strcat(s1, s2);
```

Concatenates string s2 onto the end of string s1.

3

```
strlen(s1);
```

Returns the length of string s1.

4

```
strcmp(s1, s2);
```

Returns 0 if s1 and s2 are the same; less than 0 if s1<s2; greater than 0 if s1>s2.

5

```
strchr(s1, ch);
```

Returns a pointer to the first occurrence of character ch in string s1.

6

```
strstr(s1, s2);
```

Returns a pointer to the first occurrence of string s2 in string s1.

LETS CODE!

Problem 1

Implement strStr().

Return the index of the first occurrence of needle in haystack, or **-1** if needle is not part of haystack.

Example 1:

Input: haystack = "hello", needle = "ll"

Output: 2

Example 2:

Input: haystack = "aaaaa", needle = "bba"

Output: -1

Clarification:

What should we return when needle is an empty string? This is a great question to ask during an interview.

Problem 2

Write a function to find the longest common prefix string amongst an array of strings.

If there is no common prefix, return an empty string `""`.

Example 1:

Input: ["flower","flow","flight"]

Output: "fl"

Example 2:

Input: ["dog","racecar","car"]

Output: ""

Explanation: There is no common prefix among the input strings.

Note:

All given inputs are in lowercase letters a-z.