

Longest Common Prefix

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.

Solution 1 in C++

```
class Solution {
public:
    string longestCommonPrefix(vector<string>& strs) {
        int arraySize = strs.size();
        if (arraySize<1) return "";

        int i;
        int s_len=strs[0].length();
        int prefixIndex=0;
        while(prefixIndex<s_len) {
            for(i=1;i<arraySize;i++) {
                if (strs[0][prefixIndex]!=strs[i][prefixIndex]) break;
            }
            if (i<arraySize) break;
            prefixIndex++;
        }
        if (prefixIndex) return strs[0].substr(0,prefixIndex);
        return "";
    }
};
```

Solution 2 in Java - Complexity O(1), Time Complexity O(S)

```
public String longestCommonPrefix(String[] strs) {
    if (strs == null || strs.length == 0) return "";
    for (int i = 0; i < strs[0].length() ; i++){
        char c = strs[0].charAt(i);
        for (int j = 1; j < strs.length; j ++){
            if (i == strs[j].length() || strs[j].charAt(i) != c)
                return strs[0].substring(0, i);
        }
    }
    return strs[0];
}
```