

Longest Common Prefix

Thursday, December 2, 2021 10:01 PM

BRUTE FORCE APPROACH

```
class Solution {
    public String longestCommonPrefix(String[] strs) {

        int index=0;
        int len=strs.length;
        int minLen=Integer.MAX_VALUE;
        for(int i=0;i<len;i++)
        {
            minLen=Math.min(minLen,strs[i].length());
        }
        // System.out.println("MinLength: "+minLen);

        String ans="";

        while(index<minLen)
        {
            String requiredPrefixString=strs[0].substring(0,index+1);
            // System.out.println("Current prefix Required string :"+requiredPrefixString);

            int i=0;

            for(;i<len;i++){
                // System.out.print("current String :"+strs[i]+"--> Current substring From 0 to index+1 :
                "+strs[i].substring(0,index+1)+" ____");

                if(!strs[i].substring(0,index+1).equals(requiredPrefixString))
                    break;
            }
            // System.out.println("Value of I :"+i);
            if (i<len)
                break;

            index++;
            ans=requiredPrefixString;

            // System.out.println();
            // System.out.println();

        }

        return ans;
    }
}
```

OPTIMAL APPROACH

```

class Solution {
    public String longestCommonPrefix(String[] strs) {

        String lcp = strs[0];
        for(int i = 1; i < strs.length; i++)
        {
            lcp = getCommonString(lcp, strs[i]);
            if(lcp.length() == 0)
            {
                return "";
            }
        }
        return lcp;
    }

    String getCommonString(String str1, String str2) {

        int i = 0;
        while(i < str1.length() && i < str2.length() && str1.charAt(i) == str2.charAt(i)) {
            i++;
        }

        return str1.substring(0,i);

    }
}

```