

Name: Anshul

UID: 22BCS16477

Section/Group: 609(B)

Longest Nice Substring

Code:

```
class Solution {
public:
    string longestNiceSubstring(string s) {
        if (s.size() < 2) return "";
        int lowerMask = 0, upperMask = 0;
        unordered_set<char> charSet(s.begin(), s.end());
        for (char c : s) {
            if (islower(c))
                lowerMask |= (1 << (c - 'a'));
            else
                upperMask |= (1 << (c - 'A'));
        }
        for (int i = 0; i < s.size(); i++) {
            char c = s[i];
            if ((islower(c) && (upperMask & (1 << (c - 'a')))) ||
                (isupper(c) && (lowerMask & (1 << (c - 'A'))))) {
                continue;
            }
            string left = longestNiceSubstring(s.substr(0, i));
            string right = longestNiceSubstring(s.substr(i + 1));
            return left.size() >= right.size() ? left : right;
        }
        return s;
    }
};
```

Output:

The screenshot shows a LeetCode submission for the problem "Longest Nice Substring". The submission is accepted, with 73/73 test cases passed. The runtime is 7ms, which beats 64.74% of other submissions. The memory usage is 14.29 MB, which beats 48.82% of other submissions. The code is written in C++ and implements a sliding window approach using bitmasks for lowercase and uppercase letters.

Runtime: 7ms | Beats 64.74%
Memory: 14.29 MB | Beats 48.82%

Code:

```
class Solution {
public:
    string longestNiceSubstring(string s) {
        if (s.size() < 2) return "";

        int lowerMask = 0, upperMask = 0;
        unordered_set<char> charSet(s.begin(), s.end());
        for (char c : s) {
            if (islower(c))
                lowerMask |= (1 << (c - 'a'));
            else
                upperMask |= (1 << (c - 'A'));
        }

        for (int i = 0; i < s.size(); i++) {
            char c = s[i];
            if ((islower(c) && (upperMask & (1 << (c - 'a')))) ||
                (isupper(c) && (lowerMask & (1 << (c - 'A'))))) {
                continue;
            }
        }
    }
};
```

Testcase: Case 1 Case 2 Case 3 +
s = "YazaAay"