

SUM OF BEAUTY OF ALL SUBSTRINGS

★ In this problem, we are given a string and we are supposed to return the sum of beauty of each of the substrings.

Beauty of a substring is the difference between the number of occurrences of the most occurring letter and the number of occurrences of the least occurring letter

Optimal way to do this is to create an array of substrings and just calculate each substring's beauty and add it to our answer.

Pseudocode :

```
beautyOfSubstrings(str, N) {
```

```
    ans = 0
```

```
    for (i = 0 → N - 1) {
```

```
        int[26] freq
```

```
        for (j = i → N - 1) {
```

```
            ch = str[j]
```

```
            freq[ch] += 1
```

```
            min_ans = INT_MIN
```

```
            max_ans = INT_MAX
```

```
            for (k = 0 → 26) {
```

```
                if (freq[k] > 0) {
```

```
                    min_ans = min(min_ans,
```

$\text{max_gas} = \max(\text{max_gas}, \text{freq}[k])$

```
    }  
  }  
  ans = max_ans - min_ans  
}  
return ans
```