

Intuition :

n = 1: return 1 is the base case

n = 2: return count of last entry i.e. 1 1

n = 3: return count of last entry i.e. two 1's so 21

n = 4: we have one 2 and one 1 so 1211

n = 5: , we have one 1 and one 2 and two 1's so -> 111221

n = 6: we have three 1's, two 2's and one 1 so -> 312211

n = 7: we have one 3, one 1, two 2's and two 1's -> 13112221

...

n = i: return counts in front of the number for entry of i-1 case

The following are sequence from n=1 to n=10:

1. 1
2. 11
3. 21
4. 1211
5. 111221
6. 312211
7. 13112221
8. 1113213211
9. 31131211131221
10. 13211311123113112211

Ques) What does `s=s+"&"` means, why do we add "&" at the end?

Ans => Whenever we get a character that is unequal to the previous character, we add the previous answer for the previous number to the string temp. So for the last number in the string we won't get any inequality and hence it won't get added to string temp. This is why we added a random character at the end so that random character becomes unequal to the last character of the actual string and we could get the desired answer.

Take example "1211".

Here you can not count the last '1'.

But you can in this example "1211\$"

```
if(s[j]==s[j-1]){
```

```
    cnt++;
```

```
}
```

to count the last one you've to include an ending character.