Print Bracket Number

Given an expression **exp** of length **n** consisting of some brackets. The task is to print the bracket numbers when the expression is being parsed.

Example :

Input : (a+(b*c))+(d/e)

Output : 1 2 2 1 3 3

Algorithm :

1. Make a stack of pair with the first element as character dtype and second as integer.
2. Traverse the string from left to right.
3. Initialize a count variable with 0.
4. While traversing the string , if we come across an opening bracket ' (' , then push this character along with ++count in the stack and print count .
5. If we come across a closing bracket ') ' , then print the second element of the top of the stack and then pop it.

Code :

```
1. #include <bits/stdc++.h>
2. #include <iostream>
3. using namespace std;
4.
5. void myfun()
6. {
```

```
7.    string s;
8.    cin >> s;
9.    int l = s.length();
10.      stack<pair<char,int>>st;
11.      int count = 0;
12.      for(int i=0;i<l;i++)
13.      {
14.          if(s[i] == '(')
15.          {
16.              count++;
17.              st.push({s[i],count});
18.              cout << count << " ";
19.          }
20.          else if(s[i] == ')')
21.          {
22.              cout << st.top().second << " ";
23.              st.pop();
24.
25.
26.          }
27.      }
28.      cout << endl;
29.  }
30.  int main()
31.  {
32.      int t;
33.      cin >> t;
34.      while(t>0)
35.      {
36.          myfun();
37.          t--;
38.      }
39.  }
```