

難度 2 / 5

題目敘述：

Given a string `s` which represents an expression, *evaluate this expression and return its value*.

The integer division should truncate toward zero.

You may assume that the given expression is always valid. All intermediate results will be in the range of $[-2^{31}, 2^{31} - 1]$.

Note: You are not allowed to use any built-in function which evaluates strings as mathematical expressions, such as `eval()`.

Example 1:

Input: `s = "3+2*2"`

Output: 7

Example 2:

Input: `s = " 3/2 "`

Output: 1

Example 3:

Input: `s = " 3+5 / 2 "`

Output: 5

參考答案

```
class Solution {
public:
    int solve (string &s) {
        int ans = 0, tmp = 0;
        char op = '+';
```

```

stack<int> st;

const int n = s.length();
for (int i = 0; i < n; ++i) {
    char c = s[i];
    if (isdigit(c)) tmp = tmp * 10 + (c - '0');
    if ((!isdigit(c) and c != ' ') or i == n - 1) {
        if (op == '/') {
            int now = st.top(); st.pop();
            st.push(now / tmp);
        } else if (op == '*') {
            int now = st.top(); st.pop();
            st.push(now * tmp);
        } else if (op == '+') st.push(tmp);
        else st.push(-num);
        op = c, tmp = 0;
    }
}

while (!st.empty()) {
    ans += st.top();
    st.pop();
}
return ans;
}

```