1. (30 Points) Write a program that prompts the user to enter an integer from 1 to 15 and displays a pyramid, as shown in the following sample run:

```
Enter the Number of lines: 7
          1
        2 1 2
      3 2 1 2 3
    4 3 2 1 2 3 4
  5 4 3 2 1 2 3 4 5
6 5 4 3 2 1 2 3 4 5 6
7 6 5 4 3 2 1 2 3 4 5 6 7
```

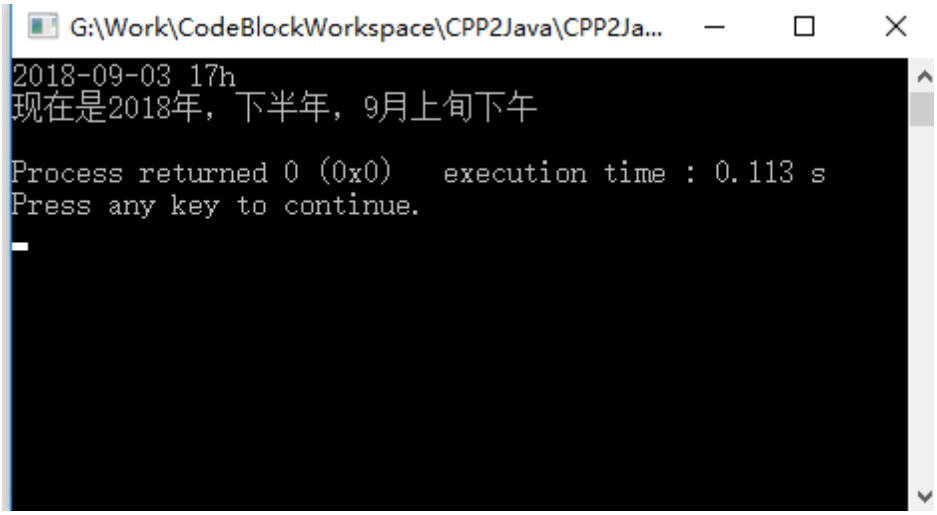
2.（Reverse Words in a String）(30 Points) Given a string, you need to write a program to reverse the order of characters in each word within a sentence while still preserving whitespace and initial word order.

Example:

```
Input: "Let's take LeetCode contest"

Output: "s'teL ekat edoCteeL tsetnoc"
```

3. (40 Points) The following C++ code is used to find out the current time. The running results are shown in the following figure. Please use Java language to migrate the following code, and implement the function of the program in at least two ways (‘if’ or ‘switch’ conditional statement).




```cpp
#include <iostream>
#include <ctime>
using namespace std;
```

```c
int main(){
    time_t rawtime;
    struct tm *ptminfo;
    time(&rawtime);
    ptminfo = localtime(&rawtime);
    int year = ptminfo->tm_year + 1900;
    int month = ptminfo->tm_mon + 1;
    int day = ptminfo->tm_mday;
    int hour = ptminfo->tm_hour;
    printf("%02d-%02d-%02d %02dh\n", year, month, day, hour);

    printf("现在是%d 年，", year);
    if(month <= 6)
        goto firstHalfYear;
    if(month >6)
        goto secondHalfYear;

    continueDealWithDay:
    if(day <=10)
        goto beginningOfMonth;
    if(day >10 && day <=20)
        goto middleOfMonth;
    if(day > 20)
        goto endOfMonth;

    continueDealWithHour:
    if(hour >0 && hour <=5)
        goto beforeDawn;
    if(hour >5 && hour <=10)
        goto morning;
    if(hour >10 && hour <=12)
        goto noon;
    if(hour >12 && hour <= 17)
        goto afternoon;
    if(hour >17 && hour <= 23)
        goto night;

    firstHalfYear:
        printf("上半年，%d 月",month);
        goto continueDealWithDay;
    secondHalfYear:
        printf("下半年，%d 月",month);
        goto continueDealWithDay;
```

```
    beginningOfMonth:
        printf("上旬");
        goto continueDealWithHour;
    middleOfMonth:
        printf("中旬");
        goto continueDealWithHour;
    endOfMonth:
        printf("下旬");
        goto continueDealWithHour;

    beforeDawn:
        printf("凌晨\n");
        goto finish;
    morning:
        printf("早上\n");
        goto finish;
    noon:
        printf("中午\n");
        goto finish;
    afternoon:
        printf("下午\n");
        goto finish;
    night:
        printf("晚上\n");
        goto finish;

    finish:
    return 0;
}
```

4. (Bonus Question:20 points)
Problem Description

New Zealand currency consists of $100, $50, $20, $10, and $5 notes and $2, $1, 50c, 20c, 10c and 5c coins. Write a program that will determine, for any given amount, in how many ways that amount may be made up. Changing the order of listing does not increase the count. Thus 20c may be made up in 4 ways: 1×20c, 2×10c, 10c+2×5c, and 4×5c.

Input

Input will consist of a series of real numbers no greater than $300.00 each on a separate line. Each amount will be valid, that is will be a multiple of 5c. The file will be terminated by a line containing zero (0.00).

Output

Output will consist of a line for each of the amounts in the input, each line consisting of the amount of money (with two decimal places and right justified in a field of width 6), followed by the number of ways in which that amount may be made up, right justified in a field of width 17.

Sample Input

```
0.20
2.00
0.00
```

Sample Output

```
  0.20                4
  2.00              293
```