Additional Programming Practice

Question 1:

In a cereal box promotion, each cereal box is marked with a code. A code is formed by 18 upper case letters in any combination (a letter may repeat multiple times). Winner codes are chosen according to specific rules that change at each promotion.
Write a function **def is_winner(code)** that returns True if code is a winner and False otherwise.
Hint: Your function must create a dictionary **counts** to store the number of times each letter appears in code. Use the dictionary **counts** to validate if **code** is a winner according to the specific rules of each promotion. **code** must satisfy all the following rules for Today's promotion:

1- **code** contains 8 or more different letters.
2- **code** contains 3 A's, 2 B's and no E's
3- **code** contains at least 1 letter that appears 1 time only.
4- **code** contains 2 or more letters that appear exactly 3 times.

Examples:
c1='ABCDABCDACDWXYZQUG'
c2='ABCDABCDABCDWXYZQU'
print (is_winner(c1), is_winner(c2)) # prints True False

Question 2:

Given a dictionary d where items (key:value) pairs are defined as (title:quantity), representing the number of each book title at a particular store. The keys are strings of length x, 6 <= x <= 30 and the values are integers between 1 and 25.

For example: d= {'Great Expectations': 3, 'Heidi': 12, 'Long Walk to Freedom': 9, 'Oliver Twist': 3}
Write Python code that will print the content of the dictionary in alphabetical order (based on book titles) in the following format (where each title is printed left-justified in a field 30 characters wide).

```
Great Expectations             3
Heidi                         12
Long Walk to Freedom           9
Oliver Twist                   3
```

Your code must work correctly for a dictionary of any length.

Question 3:

Given a dictionary d where items (key:value) pairs are defined as (title:price), representing the price of each book title at a particular store. The keys are strings of length x, 6 <= x <= 30 and the values are floating-point numbers between 1 and 50.
For example: d= {'Great Expectations': 5.95, 'Heidi': 12.00, 'Walk to Freedom': 9.62, 'Oliver Twist': 5.5}
Write Python code that will print the content of the dictionary in alphabetical order (based on book titles) in the following format (where each title is printed left-justified in a field 30 characters wide).

```
Great Expectations            $ 5.95
Heidi                         $12.00
Oliver Twist                  $ 5.50
Walk to Freedom               $ 9.62
```

Your code must work correctly for a dictionary of any length.