Problem 1:

Create a program that counts the occurrence of the word 'that' in a file (use the string class' operator '==' to find the word)

Problem 2:

Create a vector<float> and put 25 numbers into it. Then square each number and put the result back into the same location in the vector. Display the vector before and after the multiplications.

Problem 3:

Create two functions, one that takes a string* and one that takes a string&. Each of these functions should modify the outside string object in its own unique way. In main(), create and initialize a string object, print it, then pass it to each of the two functions, printing the results.

Problem 4:

Create a struct that holds two string objects and one int. Use a typedef for the struct name. Create an instance of the struct, initialize all three values in your instance, and print them out. Take the address of your instance and assign it to a pointer to your struct type. Change the three values in your instance and print them out, all using the pointer.

Problem 5:

给定一个数组 prices ，它的第 i 个元素 prices[i] 表示一支给定股票第 i 天的价格。

你只能选择 某一天 买入这只股票，并选择在 未来的某一个不同的日子 卖出该股票。设计一个算法来计算你所能获取的最大利润。

返回你可以从这笔交易中获取的最大利润。如果你不能获取任何利润，返回 0 。

示例 1:

输入:[7,1,5,3,6,4]

输出:5

解释:在第 2 天(股票价格=1)的时候买入，在第 5 天(股票价格=6)的时候卖出，最大利润=6-1=5。注意利润不能是 7-1=6，因为卖出价格需要大于买入价格；同时你不能在买入前卖出股票。

示例 2:

输入:prices = [7,6,4,3,1]

输出:0

解释:在这种情况下，没有交易完成，所以最大利润为 0

提示:

1 <= prices.length <= 105

0 <= prices[i] <= 104