++ Leetcode

String process function

String str = "I am doing string process.";

Java:

str.trim();//去除空白

str.indexOf("am");//int 找到am

str.split("doing", 2);//分割

Integer.valueOf(str);//convert string to integer

Integer.parseInt(str);//convert string to integer

C++:

str.find\_first\_not\_of(WHITESPACE);//去除空白

str.find\_last\_not\_of(WHITESPACE);

str.substr (pos);

str.find("am");// return int. To find "am"

str.strtok();//字串分割

str.stoi();//convert string to integer

substring 我還沒有寫在上面

**我要加強 C/C++ ability**

version: 2022041802

Arrays、List<T> vector<T>我還沒做筆記

--------------解題重點---

1. 詳細閱讀題目
2. 思考要寫A. Function 還是 B. class
3. 重新看題目一次
4. 重覆練習題目
5. 跟主考官討論，把自已的思維大聲講出來。
6. 英文特殊單字背起來
7. 常見指令要背起來。Java : String, Array, HashMap Set的用法 C/C++ unordered\_map
8. LinkedList 常考遞迴程式。 Linux kernel use structure of LinkedList with C programming language.
9. 我英文題目看不懂，但是看懂題目的程式範例
10. 程式主考官會使用「極大值」、「極小值」測試你寫的程式。
11. 有些考題，是在考你的細心度。
12. 面試時:跟面試官1對1 寫程式時，記得注解/\*annotation\*/

* 解題時的常見錯誤

1. 打錯字 Syntaxerror 是寫錯程式的前兩名。

\*小題示

1. 變數不要打太長Example: string revertedNumber;
2. C++, Java 要注意大小寫Upper case, lower case.
3. 解題時，先求把程式寫出來，第二次再改進。
4. 解題思維，如果遇到String、Linkedlist要把「**輸入的值**」轉換成**數字**來進行運算，再配合for while運用，最後思考forwhile終止條件。

C/ C++ common functions

#include <cstring>

#include <cctype>

char fstr[] = “Success is never easy way.”;

strlen(fstr); /\* 取得字串長度\*/

strcpy(fstr); /\* 複製字串 \*/

strcmp(fstr); /\* 比較字串 \*/

strcat(fstr); /\* 串接字串 \*/

tolower(fstr[]); /\* 大寫轉成小寫 \*/

toupper(fstr[]); /\* 小寫轉成大寫 \*/

atoi(fstr); /\* 字串轉成浮點數 \*/

atof(fstr); /\* 字串轉成數值 \*/

atol(fstr) ; /\* 字串轉成long \*/

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Java:

Integer.MAX\_VALUE;//int最大值

Integer.MIN\_VALUE;//int最小值

String ms = “Hello”;

char re = ms.charAt(0);

System.out.println(re);//H

C++:

INT\_MAX;//INT 最大值

INT\_MIN;//INT 最小值

string ms = “Hello”;

char re = ms[0];

cout<<re <<endl;//H

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Java:

String myStr = “Hello planet earth”;

myStr.indexOf(“e”);//return int 「1」 尋找字串

C:

strstr(haystack, needle);//尋找字串

using namespace std;

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Data Type:  
Java: boolean

C++: bool

C++ 新增array 2D 跟Java 不同

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* C language

In some scenarios, char arrays that were initialized or stored as the null-terminated character strings can be measured for size using the strlen function, which is part of the C standard library string utilities.

#include <stdlib.h>

#include <string.h>

#include <stdio.h>

int main(void)

{

char arr[] = {'a', 'b', 'c', 'd', 'e', 'f', 'g'};

char arr2[] = "array initialized";

printf(“%lu \n”, strlen(arr));

printf(“%lu \n”, sizeof arr);

}

# Passing char pointer in C

void **ptrch** ( char \*\* **point**) {

\*point = "asd";

}

int **main**() {

char \* **point**;

**ptrch**(&**point**);

printf("%s\n", point);

return 0;

}

* Englsih vocabulary單字:

1. Palindrome:回文. a word, phrase, or sequence that reads the same backward as forward, e.g., madam or nurses run.
2. the preceding element: 前一個元素.   
   coming before something in order, position, or time.
3. Entire:全部的.   
   with no part left out; whole.
4. subtract 減去 v
5. Iterator迭代器
6. combination 結合 n. the [mixture](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/mixture) you get when two or more things are [combined](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/combine).
7. undirected graph. 無方向性的圖
8. splicing 拼接
9. non-decreasing order非遞減順序
10. Generate Parentheses 生成括號
11. adjacent nodes 相鄰節點
12. themselves 他們自已(代名詞)
13. **ascending order**.升幕排序
14. Implement 實作; 實施
15. Duplicates 重覆; copy
16. dividend
17. divisor: 除數 *When you*[*divide*](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/divide)*21 by 7, 7 is the divisor.*
18. truncated
19. permutation :排序，交換。  
    a way, especially one of several possible variations, in which a set or number of things can be ordered or arranged.
20. lexicography : 詞典編篡 the [activity](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/activity) or [job](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/job) of writing [dictionaries](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/dictionary)
21. arrangement :安排; 準備工作 a [plan](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/plan) for how something will [happen](https://dictionary.cambridge.org/zht/%E8%A9%9E%E5%85%B8/%E8%8B%B1%E8%AA%9E-%E6%BC%A2%E8%AA%9E-%E7%B9%81%E9%AB%94/happen)
22. occur :發生; 遇見 happen; take place
23. **distinct** :獨特 recognizably different in nature from something else of a similar type.

Java:

HashMap<String, Integer> hm = new HashMap<String, Integer>();

hm.put(“Geeks”, 10);

hm.put(“welcome”, 20);

hm.get(“Geeks”);// to retrieve value from hm.

hm.isEmpty();//false

hm.size();//5

hm.containsKey(“Geeks”);//true

hm.containsValue(20);//true

hm.remove(“Geeks”);//to remove the mapping of any particular key.

for(Object key: hm.keySet()){

System.out.println(key + ”:” + map.get(key));

}

C++ Map(STL) // it’s similar HashMap, but not the samle.

C++ unordered\_map

unordered\_map<string, double> umap;

https://shengyu7697.github.io/std-unordered\_map/

// inserting values by using [] operator

umap["PI"] = 3.14;

umap["root2"] = 1.414;

umap["root3"] = 1.732;

umap["log10"] = 2.302;

umap["loge"] = 1.0;

// inserting value by insert function

umap.insert(make\_pair("e", 2.718));

umap.find(key) == umap.end()

find

map<string, string> ms;

ms.insert(pair<string, string>(“r000”, “student\_zero”));

ms[“r123”] = “student1”;

ms[“r556”] = “student2”;

iter = ms.find(“r123”);

if(iter != ms.end())

cout<<”Find, the value is” << iter ->second <<endl;

else

cout<<”Do not Find” <<endl;

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Compare Class Math in Java and C++

Java:

Math.max(a, b);

Math.min(a, b);

/\*max and min are inputed int long double float, NOT string\*/

C++:

max(5, 15);//15

max(‘a’,’z’);//z

min(5, 15);//5

min(‘a’, ‘z’);//a

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Leetcode 解題時

Java 常用 for while(), StringBuilder, String

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Add Char to String in Java

1. [Java Add Char to String Using + Operator](https://www.delftstack.com/howto/java/add-char-to-string-java/#java-add-char-to-string-using-%2b-operator)
2. [Java Add Char to String Using StringBuilder.append()](https://www.delftstack.com/howto/java/add-char-to-string-java/#java-add-char-to-string-using-stringbuilder.append)
3. [Java Add Char to a String Using the substring() Method](https://www.delftstack.com/howto/java/add-char-to-string-java/#java-add-char-to-a-string-using-the-substring-method)

C++: Add Char to String

1. Add Char to String using + operator. +=

String[] sArray = new String[]{"This", "Should", "return", "4"};

String str = “Different”;

Java:

sArray.length;

str.length();

---------------------------------------------------

Java 語法上的陷井Trap: String[] sArray = new String[]{"This", "Should", "return", "4"};

String str = "Different";

System.out.println(sArray.length);//沒有()

System.out.println(str.length());//有() -------------- 對，你沒看錯 「.length」一個有()， 另一個沒有() \_\_\_\_\_\_\_ 我刷題的時候才發現這個問題。

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* Java 與C++ Array比較表

int[] nums = {5,10,-8,12,6};

Java :

nums.length;

Arrays.sort(nums);//排序

Math.abs(nums[2]);//回傳絕對值正整數

String str = "GeeksForGeeks";

char[] ch = str.toCharArray();

for (char c : ch) {

System.out.println(c);//

List<int> listSet = new ArrayList<int>();

C++:

nums.size();

sort();//排序

abs();//回傳絕對值正整數

vector<int>\* num

https://www.cplusplus.com/reference/vector/vector/  
 vector<int> v{ 1, 5, 8, 9, 6, 7, 3, 4, 2, 0 };

sort(v.begin(), v.end());

list<int> myList = {1,2,3};

/\*我不熟的地方\*/

C 指標

sort(nums.begin(), nums.end(), 5);

vector<int>::iterator iT= find(nums.begin(), nums.end(), 5);

if(iT != nums.end());

Am I right that? Thanks for your helping.

1. Thank You. You and your team achievement ….
2. In 2021, I attended 52 webinars …
3. will help AWS business grow …
4. I’m over 10-year software development …
5. , in Taiwan, Asia.
6. I was a founder and good at the “Expanding Market Share”
7. to help AWS grow up the Market Share …

---20220510---

If you'd like to write a C programming language on a Embedded System.  
The C Dynamic Memory Allocation is very important things.  
  
functions: malloc(), calloc(), free() and realloc().  
  
These functions are defined in the <stdlib.h> header file.