## Assignment #01

# Data Structure and Algorithms.

Topic:

String data structure.

Submitted

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Submitted

To:

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## LUESTION # 01

Write clown c/c++ codes for the following functions of strings data structure:

#### Part (a)

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Remove punctuations from a given string.

#### Code:

#include (iostream) using namespace std; " 1-1 (god to 1:0 of hi) Minister stoleto) Pi int main() { couter "Enter a string."; illigate : equal vodo

1 Regardente Pris + Pirifita string stri getline (cin, str); ignos : [1-1] dipodute ] as

for (int i=0; i kstr.length(); i++)} int num = (int) str[i];

if ((num>= 33 & num <= 64) 11 (num>= 91 &num <= 96) 11 (num >= 123 & num <= 126))[

Str. erase (i, 1); }}

cout << sta;

return 0;

Past(b)

Rearrange characters in a string such that no two adjacent same

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Code:
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#includexiostream?
using namespace std;
int main () {
```

## ( remark of it seems! Part (C) are see seems?)) Al

Program to check if input is an integer or a string.

#### Code:

#include (iostream>

using namespace std;

book Fs-Number (string str) }

int start = 0;

for (; start (str.length(); start ++)}

to who should need

if (str[start] <'0' & str[start] > '9') } return false; }} Estable talogolis return true; } s [77 - Industry to >> 1005 for int count = 0; int main ()3 E( 1-10; 150 5, 3 0-1) mil cout << "Enter a string."; getline (cin 1 str); de l'appropriée (con 1 hi) ref if ( Is\_ Number (str)) 197. - . [372 is de ig/10] ] El promingo couter "Integer"; } 1:4000 - 177 67400908 else } (1117) ds >1:0=1 10) m couter "String"; } for the province of the province return 0, } Part (d) ( ( ) betogge ) } -find second most frequent character. C++ program to (1) home you = (1) tobogg Code: 1900-00993 . (!) popoadas Hinclude (iostream) using namespace std; Alliphacygo the rodal itemandie - [] standalp int main() cout « "Enter a string."; I da = [] 2/2/04/10 trouped from Gross 23 to string sta; getline (cin, str); Dauday char alphabets (26); int repeated [26];

```
for (int i=0; i<26; i++)]
                                  I formately nothing
      repeated (i)=0;
                                        Fruit - Chief
      culphabets = 'a' + 2;
      cout((alphabets[i]((" "; }
  "int count = 0;
 for (int i=0; i<26; i++)} ; parts o about 1000
      cout = 0;
     for (int j=0; j < str. length (); j+t) } = and ) sinking
        if (alphabets[i] == str(j)) } 130 /30 /30 = 1) 11
               count + +; } }
                                i a montal" whoo
          repeated [i] = count; }
 for (int i=0; ix 25; i++)}
                                   g grants is mon
     for (int 1=0; j <26; j++)}
         if ( repeated [v) > repeated [j])?
    int temp = repeated [j];
                                       of morning my
            repeated (i) = repeated (i);
            repeated (i) = in temp;
           char ch = auphabets(j);
           alphabets (j) = alphabets (i);
           alphabets (i) = ch; } }} courts o solo 1 in the
cout << "Second most frequent is: << oup houset [1]</ "number" << repealed [1]
 return 0;
                                     : 100% sodamic visits
```

Part (e)

C++ program to sot an array of name or string

#### Code:

#include (iostream) using variespace stds using namespace stds El minny top int main () } contact o return " >>+uo> couter" How many names."; exte phiste int size; garage (in, st): siz dn >>size; string arrayolsize of share not ob solar years will solar couter "Enter" << size << "names"; for (int i=0; i(size; i++)) propose summer insuran an >> array (i); } for (int i=0; 125i3e=1; i++)} for (int j=0; j<513e; j++)}(1.12, in) > 12/12 string name = array (j+1); array (j+1) = array [j']; array (j) = name; }}} for (int i=012 < 513e ; j++)} cout << array (i) s(" "; ingles parts

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C++ program to concatenate a string given times. consultations of about 1

#### Code:-

#include (iostream)

using namespace std;

int main ()}

couter " Enter a string.";

string str;

getline (cin, str);

couter" How many times do you want to concate "; " was pross " while?" is too

int nums

for (int i=0; i<num; i++)}

couter "Enter a string " < rice "to concate"; 1 100) of

getline (cin, str-1); (1) (1)

str=str.append (" "+str-1); 3 . [] 1010) ];

couter "The origional strong is: "<< strong

return 0; }

## Part (g) (1) pare

0 + ((+)) po 40

In C++, There are several ways to add characters to a string object

## std:: string:: append ()

append is a member function of the std: string class that is used to add a sequence of characters to end of emisting string.

#### Example:-

Std: String: str1 = "Hello";

Std: string :: str2 = "world";

Str. append (str2);

After this stal contain "Hello world"

## Stol: string: push\_back()

push\_back () is a member function of the std=string class that is used to add a single character to the end of the existing string.

that only purion

#### Example:-

Std: string:: strl = "Hello";

After This: str will contain & "Hara!"

#### Operator +=

The += operator is an overloaded of the std:: string crass that is used to concatenate two strings.

## Enample:

Std:: string:: str1="Hello";

Std:: string:: str2="World!";

str1 += str2;

After this str1 will contain "Hello world!"

Part (n)

Comparing two strings. in c++.

#### Code:

:((d) brough in #include (iostream) ob introduction using namespace stats \_dad :: phylandi int main ()} e of And And Alon couter "Enter a strings"; 6hn of 6920 91 String str-1, str-2; getline (cin, str-1); geteine (cin, str-2); int num-1 = str-1.length(); int num-2 = str\_2, length(); if (num\_1 1 = nom\_2)} couter "The both string are not equal."; } else 3 for (int i=0; ixstr-1-length (); i++)} if (str-1[i] }= str-2[i])} couter" The both string string are not equal"; break; }} couter" The both strings are equal. "; } return 0;

### Pant (i)

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V15, - [ [ 1] 110 ) ]

5 12 ADD 4 6

Extract all the integers from string in (++

#### Code:

#include (iostream)

using namespace std;

int main ()?

couter "Enter a string.";

string str;

cin >> str;

String num-str = "';
-for (int start=0; start < str.length(); start++)?

if (str(start) >= '0' & str(start) <= '9')?

num-str += str(start); }}

cout << num-sta; return 0; }

#### Part(j)

C++ program to Replace a world in a tent by another given word.

#### Code:

thincludexiostreams as larger the using names pace std;
int main()?

Cout < "Enter a string";

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String str., str-split ="", str-array [100];
  getline (cin , 5+2);
  ·int index=0;
                                a include liestroms
 for (int i=0; i (str.length 1); i++)}
                              Free significant Carso
    if (str[i] != ' ) }
                                   ? ( ) mism Ini
        Sta_split += sta[i]; }
                            mote o posal o store
    else{
                                  : N'e Ranta
       Str-array [index]=str-split;
                                  TIN ST CAR:
       Str-split = "";
       inclen++; } }
Strang [index] = str-split; total a total
forlint i=0; i = indent; i++) }
     couted Pock word";
 String Strong, Str-replace;
 cini): Statory;
couter " Enter replace word.";
 cun >> str-replace;
for (int i=0; ixindem; i++)?
    if (str-array[i] == str-org)?
       str_array[i] = str-replace; }}
return o;
                            Brook o was a page
```