

1- Write a program that takes a string as input and Copying Strings in another

اكتب برنامجًا يأخذ string كمدخلات وينسخ string في آخر

Input

```
Enter a string: Gammal
```

Output

```
Copied string: Gammal
```

Solution

```
// www.gammal.tech

#include <iostream>
#include <string>
using namespace std;

int main() {
    string x, y;
    cout << "Enter a string: ";
    cin >> x;
    y = x;
    cout << "Copied string: " << y << endl;
    return 0;
}
```

2- Write a program that takes a string as input and Clearing String

اكتب برنامجًا يأخذ string كمدخلات ويمسح string

Input

```
Enter a string: Gammal
```

Output

```
Cleared string:
```

Solution

```
// www.gammal.tech

#include <iostream>
#include <string>
using namespace std;

int main() {
    string x;
    cout << "Enter a string: ";
    cin >> x;
    x.clear();
    cout << "Cleared string: " << x << endl;
    return 0;
}
```

3- Write a program that takes a string as input and Comparing Strings

اكتب برنامجًا يأخذ string كمدخلات ويقارن strings

Input

```
Enter the first string: Gammal
Enter the second string: Gammal
```

Output

```
Equal
```

Solution

```
// www.gammal.tech

#include <iostream>
#include <string>
using namespace std;

int main() {
    string x, y;
    cout << "Enter the first string: ";
    cin >> x;
    cout << "Enter the second string: ";
    cin >> y;
    if (x == y)
        cout << "Equal" << endl;
    return 0;
}
```

4- Write a program that takes two string as input and Concatenating the strings

اكتب برنامجًا يأخذ two string كمدخلات ويقوم بربط strings

Input

```
Enter the first string: Gammal
Enter the second string: Tech
```

Output

```
Concatenated String: GammalTech
```

Solution

```
// www.gammal.tech

#include <iostream>
#include <string>
using namespace std;

int main() {
    string x, y;
    cout << "Enter the first string: ";
    cin >> x;
    cout << "Enter the second string: ";
    cin >> y;
    string result = x + y;
    cout << "Concatenated String: " << result << endl;
    return 0;
}
```

5- Write a program that takes Input Strings until a Condition word equal "stop"

اكتب برنامجًا يأخذ Strings الإدخال حتى تساوي الكلمة الشرطية "stop"

Input & Output

```
Enter strings (enter 'stop' to stop): Hello
Entered string: Hello
World
Entered string: World
stop
```

Solution

```
// www.gammal.tech

#include <iostream>
#include <string>
using namespace std;

int main() {
    string input;
    cout << "Enter strings (enter 'stop' to stop): ";
    while (cin >> input && input != "stop") {
        cout << "Entered string: " << input << endl;
    }
    return 0;
}
```

6- Write a program to sort a vector of strings in descending order. The vector strVector is initially {"apple", "orange", "banana", "grape"}.

اكتب برنامجًا لفرز vectors السلاسل ترتيبًا تنازليًا. المتجه strVector هو في البداية {"apple", "orange", "banana", "grape"}.

Output

```
Sorted Vector of Strings in Descending Order:  
orange grape banana apple
```

Solution

```
// www.gammal.tech  
  
#include<iostream>  
#include<vector>  
#include<algorithm>  
using namespace std;  
  
int main() {  
    // Vector of strings  
    vector<string> strVector = {"apple", "orange", "banana", "grape"};  
  
    // Sorting the vector of strings in descending order  
    sort(strVector.begin(), strVector.end(), greater<string>());  
  
    // Printing the sorted vector of strings  
    cout << "Sorted Vector of Strings in Descending Order:\n";  
    for(int i = 0; i < strVector.size(); i++)  
        cout << strVector[i] << " ";  
  
    return 0;  
}
```

7- Develop a program that utilizes a set to store and automatically sort a sequence of strings. Insert the strings "apple", "orange", "banana", "grape", and "apple" into the set.

قم بتطوير برنامج يستخدم مجموعة لتخزين سلسلة من السلاسل وفرزها تلقائيًا.
أدخل السلاسل "apple", "orange", "banana", "grape", and "apple" into the set.

Output

```
Sorted Set Elements:  
apple banana grape orange
```

Solution

```
// www.gammal.tech

#include<iostream>
#include<set>
using namespace std;

int main() {
    set<string> stringSet;

    stringSet.insert("apple");
    stringSet.insert("orange");
    stringSet.insert("banana");
    stringSet.insert("grape");
    stringSet.insert("apple");

    // Printing the elements of the set
    set<string>::iterator it;
    cout << "Sorted Set Elements:\n";
    for (it = stringSet.begin(); it != stringSet.end(); it++)
        cout << (*it) << " ";

    return 0;
}
```

8- Develop a program that employs a set to store and automatically sort a sequence of strings entered by the user. Prompt the user to input 7 strings and insert them into the set.

تطوير برنامج يستخدم مجموعة لتخزين string من strings التي يدخلها المستخدم وفرزها تلقائيًا. اطلب من المستخدم إدخال 7 string وإدراجها في المجموعة.

Input

```
Enter 7 strings:
Orange Apple Banana grape chery orange Orange
```

Output

```
Sorted Set Elements:
Apple Banana Orange chery grape orange
```

Solution

```
// www.gammal.tech

#include<iostream>
#include<set>
using namespace std;

int main() {
    set<string> userStringSet;

    // Taking 7 strings from the user and inserting into the set
    cout << "Enter 7 strings:\n";
    for (int i = 0; i < 7; i++) {
        string userInput;
        cin >> userInput;
        userStringSet.insert(userInput);
    }

    // Printing the elements of the set
    set<string>::iterator it;
    cout << "Sorted Set Elements:\n";
    for (it = userStringSet.begin(); it != userStringSet.end(); it++)
        cout << (*it) << " ";

    return 0;
}
```

9- Develop a program that uses a set to store and automatically sort a sequence of words entered by the user. Allow the user to input words until they enter the same word twice consecutively. Print the sorted set of unique words.

تطوير برنامج يستخدم set لتخزين وفرز string من الكلمات التي يدخلها المستخدم تلقائياً. السماح للمستخدم بإدخال الكلمات حتى يقوم بإدخال نفس الكلمة مرتين متتاليتين. طباعة set المصنفة من الكلمات الفريدة.

Input

```
Enter words (enter the same word twice in a row to stop):
apple banana grape grape
```

Output

```
Sorted Unique Words:  
apple banana grape
```

Solution

```
// www.gammal.tech  
  
#include<iostream>  
#include<set>  
#include<string>  
using namespace std;  
  
int main() {  
    set<string> uniqueWordSet;  
    string previousInput = "";  
  
    // Taking words from the user until the same word is entered twice consecutively  
    cout << "Enter words (enter the same word twice in a row to stop):\n";  
    string userInput;  
    cin >> userInput;  
    while (userInput != previousInput) {  
        uniqueWordSet.insert(userInput);  
        previousInput = userInput;  
        cin >> userInput;  
    }  
  
    // Printing the unique words in the sorted set  
    set<string>::iterator it;  
    cout << "Sorted Unique Words:\n";  
    for (it = uniqueWordSet.begin(); it != uniqueWordSet.end(); it++)  
        cout << (*it) << " ";  
  
    return 0;  
}
```

10- Write a program that utilizes a set to store and automatically sort a sequence of positive integers entered by the user. Allow the user to input integers until they enter a number greater than 100. Print the sorted set of unique integers.

اكتب برنامجًا يستخدم `set` لتخزين وفرز سلسلة من الأعداد الصحيحة الموجبة التي أدخلها المستخدم تلقائيًا. اسمح للمستخدم بإدخال الأعداد الصحيحة حتى يقوم بإدخال رقم أكبر من 100. قم بطباعة المجموعة التي تم فرزها من الأعداد الصحيحة الفريدة.

Input

```
Enter positive integers (enter a number greater than 100 to stop):  
99 84 36 200
```

Output

```
Sorted Unique Integers:  
36 84 99
```

Solution

```
// www.gammal.tech  
  
#include<iostream>  
#include<set>  
using namespace std;  
  
int main() {  
    set<int> uniqueIntSet;  
  
    // Taking positive integers from the user until a number greater than 100 is entered  
    cout << "Enter positive integers (enter a number greater than 100 to stop):\n";  
    int userInput;  
    cin >> userInput;  
    while (userInput <= 100) {  
        uniqueIntSet.insert(userInput);  
        cin >> userInput;  
    }  
  
    // Printing the unique integers in the sorted set  
    set<int>::iterator it;  
    cout << "Sorted Unique Integers:\n";  
    for (it = uniqueIntSet.begin(); it != uniqueIntSet.end(); it++)  
        cout << (*it) << " ";  
  
    return 0;  
}
```
