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SATRLAR BILAN ISHLASH

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Reja

- C++ dasturlash tilida string funksiyalari bilan ishlash.
- C++ dasturlash tilida to_string() funksiyasi haqida.
- Amaliy mashqlar.

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Shartli belgilar

- Eslab qoling
- Bilib oling
- Misol uchun
- Mumkin emas
- Uyga topshiriqlar
- Amaliy yordam

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C++ dasturlash tilida string funksiyalari bilan ishlash

Funksiya	Izoh
insert()	Biror satrga boshqa satrning istalgan qismini qo‘shish.
replace()	Satrning biror qismini almashtirish.
swap()	Ikkita satrning qiymatlarini almashtirish.
substr()	Satrning biror qismidan nusxa olish.
find()	Satrdan izlash funksiyalari.
compare()	S1 va S2 satrni bir biri bilan solishtirish uchun qo‘llaniladi
empty()	satrni bo‘shliqqa tekshirish

Qo‘shimcha ma’lumot

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Bilib oling

insert() – ushbu funksiya yordamida C++ dasturlash tilida biror satrga boshqa satrning istalgan qismini qo‘shish. Qo‘shilayotgan satirning ixtiyoriy indekisidan boshlab n ta belgini ham qo‘shish imkoniyati mavjud.

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “ world!”;
    s1.insert(5, s2);
    cout << " >>> " << s1 << endl;
    return 0;
}
```

```
Hello world!

Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “ world!”;
    s1.insert(5, s2, 0, 3);
    cout << " >>> " << s1 << endl;
    return 0;
}
```

```
Hello wo

Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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Bilib oling

replace() – ushbu funksiya yordamida C++ dasturlash tilida satrning biror qismini almashtirish uchun yoki string toifali o‘zgaruvchi to‘liqligicha almashtirishda qo‘llaniladi.

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “ world!”;
    s1.replace(2, 3, s2);
    cout << " >>> " << s1 << endl;
    return 0;
}
```

```
He world!


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “ world!”;
    s1.replace(2, 3, s2, 3, 4);
    cout << " >>> " << s1 << endl;
    return 0;
}
```

```
Herld!


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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Bilib oling

swap() – ushbu funksiya yordamida C++ dasturlash tilida ikkita satrning qiymatlarini almashtirishda qo‘llaniladi.

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “world!”;
    swap(s1, s2);
    cout << " >>> " << s1 << endl;
    cout << " >>> " << s2 << endl;
    return 0;
}
```

```
>>> world!

>>> Hello
Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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Bilib oling

substr() – ushbu funksiya orqali biz C++ dasturlash tilida ixtiyoriy string toifali satrning biror qismidan nusxa olish uchun qo‘llaniladi.

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “”;
    s2 = s1.substr(3);
    cout << " >>> " << s2 << endl;
    return 0;
}
```

```
>>> lo


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = “Hello”;
    string s2 = “”;
    s2 = s1.substr(1, 3);
    cout << " >>> " << s2 << endl;
    return 0;
}
```

```
>>> ell


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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Bilib oling

find() – ushbu funksiya orqali biz C++ dasturlash tilida Satrdan izlash funksiyasi. Agar qidirilayotgan satr (s1) topilsa, mos keluvchi satr qismining boshlanish indeksini javob sifatida qaytaradi.

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string str = "Hello world !!!”;
    string s = “!!!”;
    cout << " >>> " << str.find(s);
    return 0;
}
```

```
>>> 0


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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Bilib oling

compare() - ushbu funksiya orqali biz C++ dasturlash tilida ixtiyoriy S1 va S2 satrni bir biri bilan solishtirish uchun qo‘llaniladi.

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = "Hello world";
    string s2 = “Hello world";

    cout << " >>> " << s1.compare(s2);
    return 0;
}
```

```
>>> 0


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = "Hello world";
    string s2 = “Hello worl";

    cout << " >>> " << s1.compare(s2);
    return 0;
}
```

```
>>> 1


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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```
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string s1 = "Hello world";
    string s2 = “Hello world!";

    cout << " >>> " << s1.compare(s2);
    return 0;
}
```

```
>>> -1


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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Bilib oling

empty() – ushbu funksiya orqali biz C++ dasturlash tilida ixtiyoriy string toifali ma’lumotlarni bo‘shlikka tekshirish uchun qo‘llaniladi.

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```cpp
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string str = "Hello world";

    cout << " >>> " << str.empty();
    return 0;
}
```

```
>>> 0


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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```cpp
#include<iostream>
#include<string.h>

using namespace std;

int main(){
    string str = "";

    cout << " >>> " << str.empty();
    return 0;
}
```

```
>>> 1


Process returned 0 (0x0)
execution time : 0.047 s
Press any key to continue.
```

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C++ dasturlash tilida to_String() funksiyasi haqida

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Syntax :

```
string to_string (int val);
string to_string (long val);
string to_string (long long val);
string to_string (unsigned val);
string to_string (unsigned long val);
string to_string (unsigned long long val);
string to_string (float val);
string to_string (double val);
string to_string (long double val);
```

Parameters :

val - Numerical value.

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Bilib oling

- ✓ `int stoi(string strNumber)`
- ✓ `long stol(string strNumber)`
- ✓ `float stof(string strNumber)`
- ✓ `double stod(string strNumber)`

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Amaliy mashqlar

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Uyga topshiriq

1

Satr berilgan. Shu satrda “cat” va “dog” so‘zlari teng miqdorda uchrasa, true qaytaruvchi funksiya tuzing.

```
catDog("catdog") → true
catDog("catcat") → false
catDog("1cat1cadodog") → true.
```

Amaliy yordam

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Uyga topshiriq

2

Satr berilgan. Satrda “code” so‘zi necha marta borligini qaytaruvchi funksiya tuzing. faqat “code” so‘zidagi d harfi o‘rnida ixtiyoriy harf bo‘lishi mumkin. “cope” yoki “cooe”.

```
countCode("aaacodebbb") → 1
countCode("codexxcode") → 2
countCode("cozexxcope") → 2
```

PDP ACADEMY

Uyga topshiriq

3

2 ta a va b satr berilgan. shu satrlardan biri ikkinchisi bilan tugasa, true qaytaruvchi funksiya tuzing. bunda katta-kichik harflar farqlanmaydi.

```
endOther("Hiabc", "abc") → true
endOther("AbC", "HiaBc") → true
endOther("abc", "abXabc") → true
```

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Uyga topshiriq

4

Satr berilgan Agar shu satr “xyz” so‘zini o‘z ichiga olsa, true qaytaring, lekin nuqta(.) belgisi davomidan “xyz” uchrasa hisobga olinmasin.

```
xyzThere("abcxyz") → true
xyzThere("abc.xyz") → false
xyzThere("xyz.abc") → true
xyzThere("abc.xyzxyz") → true
```

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Uyga topshiriq

5

2 ta a va b satr berilgan. a satrni 1-harf, b-satrni 1-harfi, a satrni 2-harfi, b satrni 2-harfi, …. Shu ketma ketlik boyicha harflardan iborat yangi satrni qaytaring. Oxirida a yoki b satrda qolib ketgan harflar hammasi yangi satrga qo’shib yuboriladi.

```
mixString("abc", "xyz") → "axbycz"
mixString("Hi", "There") → "HTihere"
mixString("xxxx", "There") → "xTxhxexre"
```

Amaliy yordam

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Uyga topshiriq

6

Satr va n soni berilgan. Shu satrni oxirgi n ta harfini n marta yonma-yon qo’yib, yangi satrni qaytaruvchi funksiya tuzing.

```
repeatEnd("Hello", 3) → "llollollo"
repeatEnd("Hello", 2) → "lolo"
repeatEnd("Hello", 1) → "o"
```

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Uyga topshiriq

7

Str satri va n soni berilgan. str satrini birinchi n ta belgisini davomidan str satrini birinchi n-1 ta belgisini va yana davomidan str satrini n-2 ta belgisini … joylashtiring. Hosil bolgan yangi satrni qaytaruvchi funksiya tuzing.

```
repeatFront("Chocolate", 4) → "ChocChoChC"
repeatFront("Chocolate", 3) → "ChoChC"
repeatFront("Ice Cream", 2) → "IcI"
```

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Uyga topshiriq

8

word va ***sep*** nomli satrlar va **n** soni berilgan. **n** ta wordni birin-ketin joylashtiring va orasiga ***sep*** satrlarni qo'ying. Hosil bo'lgan satrni qaytaruvchi funksiya tuzing.

```
repeatSeparator("Word", "X", 3) → "WordXWordXWord"
repeatSeparator("This", "And", 2) → "ThisAndThis"
repeatSeparator("This", "And", 1) → "This"
```

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Uyga topshiriq

9

Satr va n soni berilgan. Agar satrni birinchi n ta harfidan iborat so‘z satrni boshqa qismida ham uchrasa, true qaytaring, aks holda false.

```
prefixAgain("abXYabc", 1) → true
prefixAgain("abXYabc", 2) → true
prefixAgain("abXYabc", 3) → false
```

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Uyga topshiriq

10

Satr berilgan. Shu satrni o‘rtasida “xyz” turgan bo‘lsa true qaytaring. Bunda “xyz” ni chap tomonidagi va o‘ng tomonidagi belgilar soni ko‘pi bilan 1taga farq qilsa ham satrni o‘rtasida turibdi deb hisoblansin.

```
xyzMiddle("AAxyzBB") → true
xyzMiddle("AxyzBB") → true
xyzMiddle("AxyzBBB") → false
```

Amaliy yordam

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Uyga topshiriq

11

Sandwich bu 2ta nonni orasiga solingan masalliqlardan iborat ovqat. Satr berilgan. Satrda birinchi uchraydigan va oxirgi uchraydigan “bread” so‘zini orasidagi satrni qaytaring. Agar satrda 2ta “bread” bo‘lmasa bosh string qaytaruvchi funksiya tuzing.

```
getSandwich("breadjambread") → "jam"
getSandwich("xxbreadjambreadyy") → "jam"
getSandwich("xxbreadyy") → ""
```

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Uyga topshiriq

12

Satr berilgan. Satrda har 1ta uchragan ‘*’ belgisidan 1ta oldingi va 1ta keyingi belgilar teng bo‘lsa, true qaytaring. Agar ‘*’dan 1ta oldin yoki 1ta keyin belgi bo’lmasa e’tibor qilmang.

```
sameStarChar("xy*yzz") → true
sameStarChar("xy*zzz") → false
sameStarChar("*xa*az") → true
```

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Uyga topshiriq

13

Satr berilgan. Satrda z va p harflarini orasida 1tagina belgi bo‘lsa, uni tushirib qoldiring va yangi satrni qaytaruvchi funksiya tuzing.

```
zipZap("zipXzap") → "zpXzp"
zipZap("zopzop") → "zpzp"
zipZap("zzzopzop") → "zzzpzp"
```

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Uyga topshiriq

14

2 ta str va word nomli satrlar berilgan. str satrida barcha uchraydigan word lardan tashqari qolgan belgilarni ‘+’ belgisi bilan almashtiring.

```
plusOut("12xy34", "xy") → "++xy++"
plusOut("12xy34", "1") → "1+++++"
plusOut("12xy34xyabcxy", "xy") → "++xy++xy+++xy"
```

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Uyga topshiriq

15

Satr berilgan. Satrda ‘y’ yoki ‘z’ belgisi bilan tugaydigan so‘zlar sonini toping. (katta-kichik harf farqi yo‘q) Masalan, “heavy” yoki “XYZ” sozlari hisobga olinadi. So’zlar ‘y’ yoki ‘z’ bilan tugaydi deymiz, qachonki shulardan keyin alifbo harfi bo’lmasa.

```
countYZ("fez day") → 2
countYZ("day fez") → 2
countYZ("day:yak") → 1
```

Amaliy yordam

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Uyga topshiriq

16

2 ta a va b satrlar berilgan. a satrni ichida barcha b satrlari olib tashlang va natijani qaytaruvchi funksiya tuzing.

```
withoutString("Hello there", "llo") → "He there"
withoutString("Hello there", "e") → "Hllo thr"
withoutString("Hello there", "x") → "Hello there"
withoutString("abyyyab", "yy") → "abyab“
```

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Uyga topshiriq

17

Satr berilgan. Agar satrda barcha “is” lar soni “not” lar soniga teng bolsa, true qaytaruvchi funksiya tuzing.

```
equalIsNot("This is not") → false
equalIsNot("This is notnot") → true
equalIsNot("noisxxnotyynotxisi") → true
```

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Uyga topshiriq

18

Satr berilgan. Agar satrda ‘g’ dan oldin yoki keyin ‘g’ bolmasa, ‘g’ belgisi yolg’iz deyiladi. Agar satrda yolg’iz ‘g’ uchramasa, true qaytaring.

```
gHappy("xxggxx") → true
gHappy("xxgxx") → false
gHappy("xxggyygxx") → false
gHappy("xxgggxyg") → false
```

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Uyga topshiriq

19

Satr berilgan. Agar 1ta belgi satr ketma-ket 3 marta joylashgan bo‘lsa, uchlik deyiladi. Berilgan satrda barcha uchliklar sonini toping va natijani qaytaring. Bunda uchliklar ustma-ust tushishi mumkin.

```
countTriple("abcXXXabc") → 1
countTriple("xxxabyyyycd") → 3
countTriple("a") → 0
```

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Uyga topshiriq

20

Satr berilgan. Satrda uchragan barcha raqamlar yigindisini topib natija qaytaruvchi funksiya tuzing.

```
sumDigits("aa1bc2d3") → 6
sumDigits("aa11b33") → 8
sumDigits("Chocolate") → 0
```

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E’tiboringiz uchun raxmat