LABORATORY WORK N 6

String Processing

The purpose of the work's - Learn practical skills in operations with strings

Task for independent work

1. Study the section of lectures dedicated to work **with strings**;
2. Develop an algorithm for solving the problem
3. Develop a program in C ++ language for solving problem
4. Run the program on your computer

In C++ is used special **string** type data for working with text

string s;

string s=""; // empty string

string s1 ("abd"); // give the value to variable s

string s2="abd"; // other variant

s.length(); determine length

getline(cin,s) enter string

s1=s2 Copy string

s=s1+s2 concatenation of strings

s.substr(pos, length) —return length size substring beginning with pos fom string s;

s.insert(pos, s1) — insert string **s1** into **s** beginning pos;

s.erase(pos, length) — delete substring begiining pos and size length from s

s.find(s1, pos) — find substring s1 into s beginning pos and return first position

s1.compare(s2) return integer value -1 s1<s2 0 s1=s2 1 s1>s2 -ONLY (take in account REGISTR)

You can operate with string as array of char !!!

Example 1. Determine number of occurence of symbol A in given string

```
#include <iostream>
using namespace std;
int main ()
{
string a ="ErasdfAfgAAg56AhjAyuu";
int i, n, k=0;
n=a.length();
for (i=0;i<n;i++)
if (a[i]=='A')
k=k+1;
cout<<k;
}
```

Example 2. Compare

```
#include <iostream>
using namespace std;
main ()
{
string a ="Program";
```

```
string b="Pascal";
if (a.compare(b)==-1)
cout<<"a<b";
else if (a.compare(b)==1)
cout<<"a>b";
else
cout<<"a=b";
}
```

Example 3. Concatenation and substring

```
#include  <iostream>
using namespace std;
main ()
{
string a="Program";
string b="Pascal";
string c;
 if (a.compare(b)==0)
 {
 c=a+"  "+b;
 cout<<c.length();}
  else
 cout<< (a.substr(2,4)+b.substr(3,2)).length() ;
 }
```

Example 4. Find

```
#include  <iostream>
using namespace std;
main ()
{
string  a="Programc++";
string b="ram";
int i;
i=a.find(b,1);
cout<<i;
}
```

Tasks for individual work

1. Determine the number of occurrences of the symbol **B in given string**
2. Determine the number of occurrences of the symbol **D or S in given string**
3. Delete from given string 7^{th} and 8^{th} symbols and create new string and print it
4. Delete from given string last 3 symbols and create new string and print it
5. Delete from given string first 4 symbols and create new string and print it
6. Given 2 strings. Append 4 last symbols from second string to first string. Print it
7. Given 2 strings. Append 3 first symbols from second string to first string. Print it
8. Given string. Create new string in inverse style and print it
9. Given string. Determine symbols on **even** positions and create new string from them. Print it.
10. Given string. Determine symbols on **odd** positions and create new string from them. Print it.
11. Given 2 strings. Use 3 symbols from first string beginning of 5 position and join with second string. Print it.
12. Given string. Determine number of occurrences of the symbols **AA in given string**
    Print it.
13. Given string. Determine number of occurrences of the symbols **ABA in given string**
    Print it.
14. Given string. Determine number of digits in this string. Print it.
15. Given string. Determine number of capital letters in this string. Print it.

Good Luck !