

Министерство образования Республики Беларусь

Учреждение образования

«БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ИНФОРМАТИКИ И РАДИОЭЛЕКТРОНИКИ»

Кафедра инженерной психологии и эргономики

ЛАБОРАТОРНАЯ РАБОТА № 1

по дисциплине

«СОВРЕМЕННЫЕ ЯЗЫКИ ПРОГРАММИРОВАНИЯ»

Вариант №6

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1. Задача

1. Найти длину самого длинного слова в строке.

2. Листинг кода

1. C++

```
#include <iostream>
#include <sstream>
#include <string>

using namespace std;
int main()
{
    string s;

    getline(cin, s );

    string::size_type max_size = 0;
    string max_word;
    string word;

    istringstream is( s );
    max_size = 0;
    while ( is >> word )
    {
        if ( max_size < word.size() )
        {
            max_size = word.size();
            max_word = word;
        }
        else if ( max_size == word.size() )
        {
            max_word += "; ";
            max_word += word;
        }
    }

    cout << max_size << ' ' << max_word << endl;
}
```

2. Python

```
# Longest word

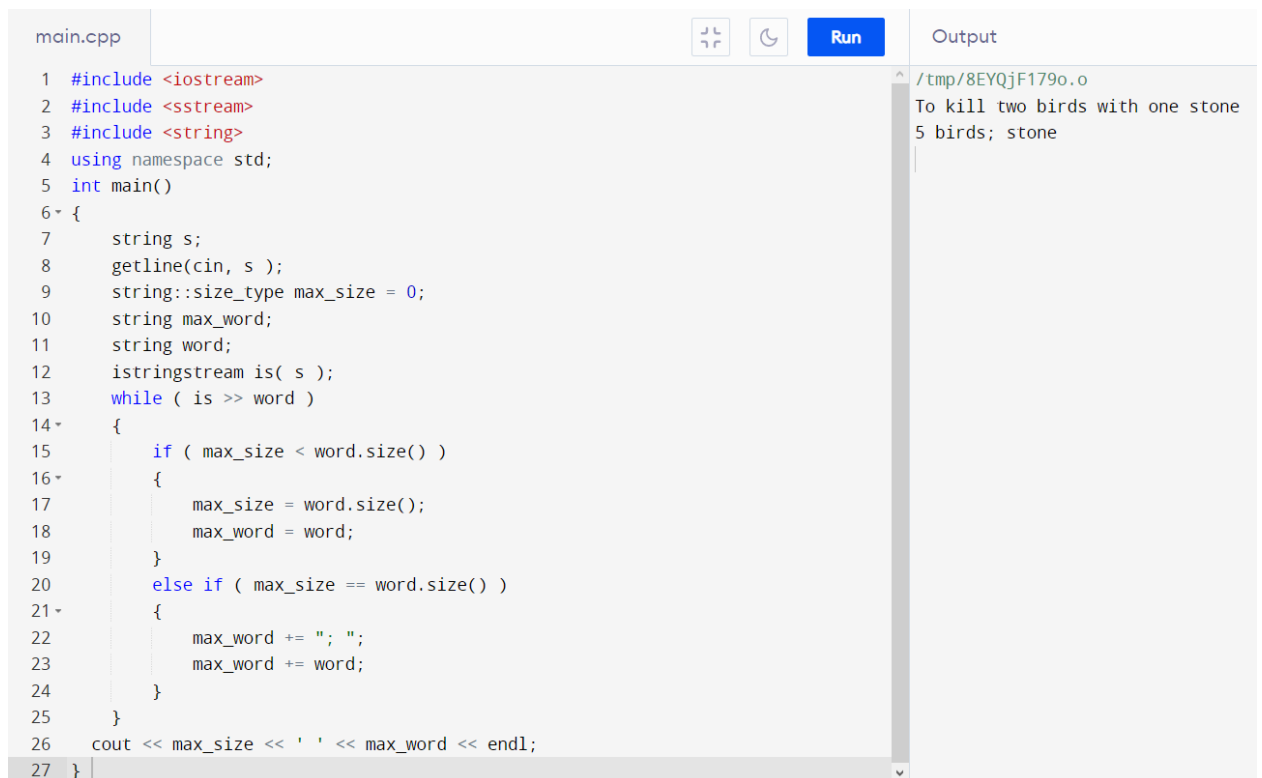
# Reading sentence from user

sentence = input("Enter sentence: ")

# Finding longest word
longest = max(sentence.split(), key=len)

# Displaying longest word
print("Longest word is: ", longest)
print("And its length is: ", len(longest))
```

3. Результат работы программы

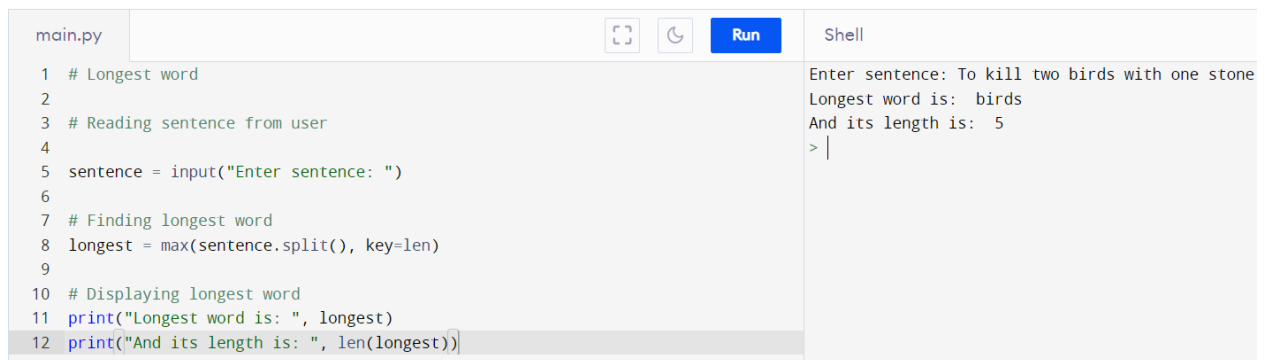


The screenshot shows a C++ IDE with a file named `main.cpp`. The code reads a line of text from standard input and finds the longest word. The output window shows the result of running the program with the input sentence "To kill two birds with one stone 5 birds; stone".

```
1 #include <iostream>
2 #include <sstream>
3 #include <string>
4 using namespace std;
5 int main()
6 {
7     string s;
8     getline(cin, s );
9     string::size_type max_size = 0;
10    string max_word;
11    string word;
12    istringstream is( s );
13    while ( is >> word )
14    {
15        if ( max_size < word.size() )
16        {
17            max_size = word.size();
18            max_word = word;
19        }
20        else if ( max_size == word.size() )
21        {
22            max_word += " ";
23            max_word += word;
24        }
25    }
26    cout << max_size << ' ' << max_word << endl;
27 }
```

Output: /tmp/8EYQjF179o.o
To kill two birds with one stone
5 birds; stone

Рисунок 1 – программа на C++



The screenshot shows a Python IDE with a file named `main.py`. The code reads a sentence from the user and finds the longest word. The shell window shows the execution with the input sentence "To kill two birds with one stone".

```
1 # Longest word
2
3 # Reading sentence from user
4
5 sentence = input("Enter sentence: ")
6
7 # Finding longest word
8 longest = max(sentence.split(), key=len)
9
10 # Displaying longest word
11 print("Longest word is: ", longest)
12 print("And its length is: ", len(longest))
```

Shell: Enter sentence: To kill two birds with one stone
Longest word is: birds
And its length is: 5
> |

Рисунок 2 – программа на Python