

Привет!

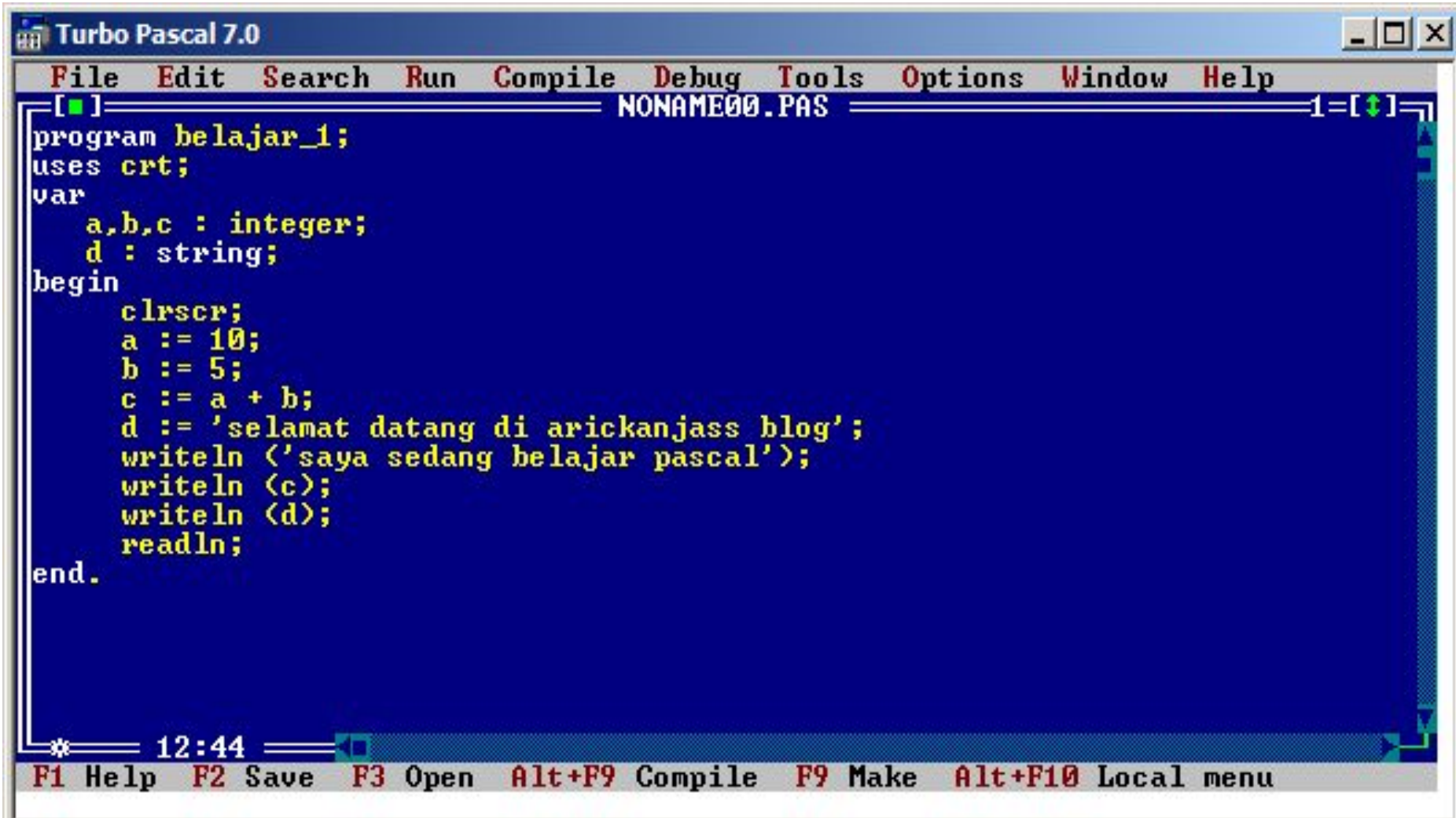
Булат  
Шаехов  
2 курс

# Изучаем C#!

# Что такое Паскаль?

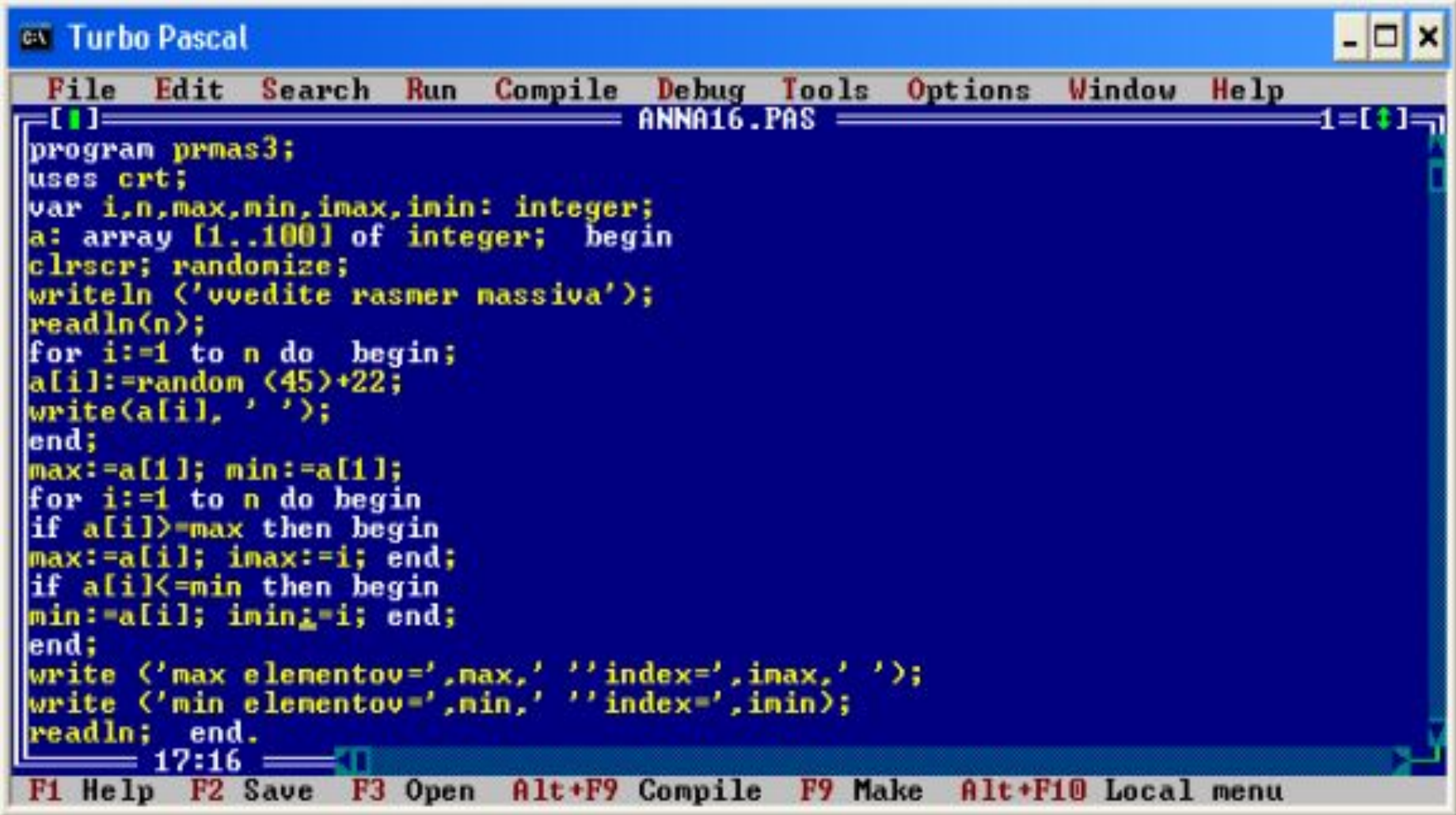


# Просто код



```
Turbo Pascal 7.0
File Edit Search Run Compile Debug Tools Options Window Help
[ ] NONAME00.PAS 1=[↑]
program belajar_1;
uses crt;
var
  a,b,c : integer;
  d : string;
begin
  clrscr;
  a := 10;
  b := 5;
  c := a + b;
  d := 'selamat datang di arickanjass blog';
  writeln ('saya sedang belajar pascal');
  writeln (c);
  writeln (d);
  readln;
end.
* 12:44
F1 Help F2 Save F3 Open Alt+F9 Compile F9 Make Alt+F10 Local menu
```

# ДЛИННЫЙ КОД



```
program prmas3;
uses crt;
var i,n,max,min,imax,imin: integer;
a: array [1..100] of integer; begin
clrscr; randomize;
writeln ('vvedite rasmer massiva');
readln(n);
for i:=1 to n do begin;
a[i]:=random (45)+22;
write(a[i], ' ');
end;
max:=a[1]; min:=a[1];
for i:=1 to n do begin
if a[i]>max then begin
max:=a[i]; imax:=i; end;
if a[i]<min then begin
min:=a[i]; imin:=i; end;
end;
write ('max elementov=',max,' ' 'index=',imax,' ');
write ('min elementov=',min,' ' 'index=',imin);
readln; end.
```

17:16

F1 Help F2 Save F3 Open Alt+F9 Compile F9 Make Alt+F10 Local menu

# Процедура в Паскале

```
1.  var
2.    a, b, c: integer;
3.
4.  procedure sum(x, y: integer; var z: integer);
5.  begin
6.    z := x + y;
7.  end;
8.
9.  begin
10.   write('Введите два числа: ');
11.   readln(a, b);
12.   sum(a, b, c); {процедура вызывается своим именем,
13.               которое вы написали после зарезервированного слова
14.               procedure в описании}
13.   writeln(c);
14. end.
```

Всё...

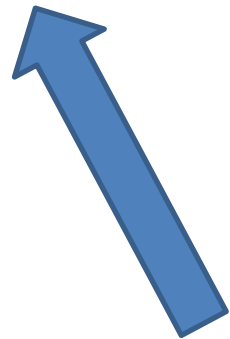
# Платформы





# ООП

объектно-ориентированное  
программирование



Объект

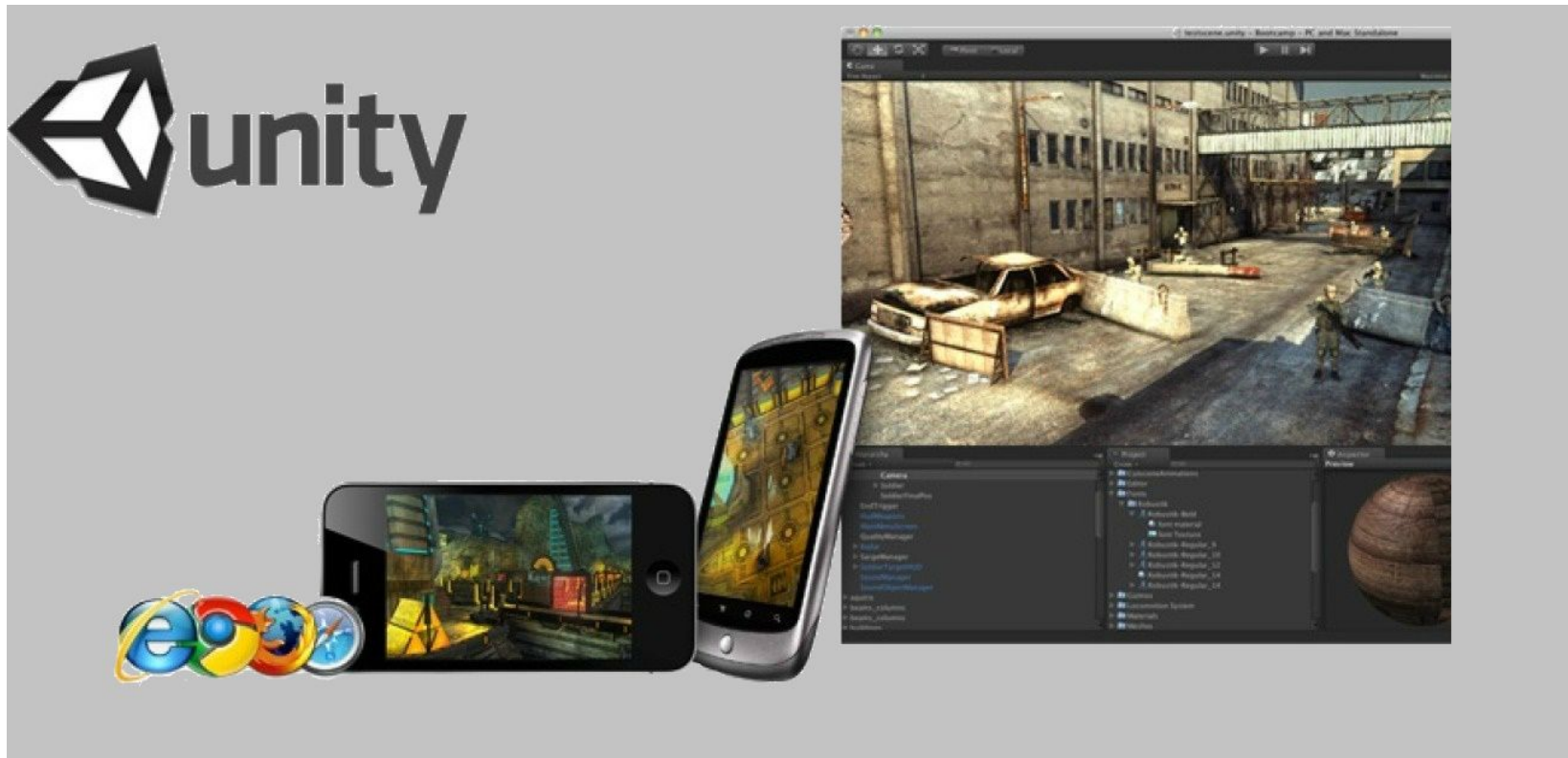


LSK

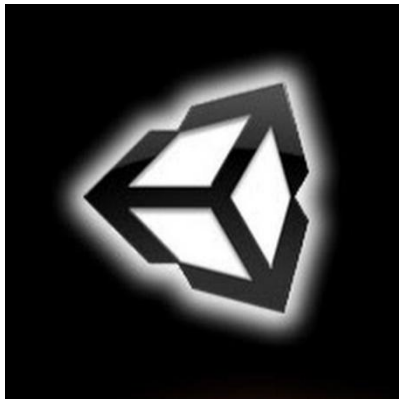
# ООП языки



# Почему C#??



# Направления



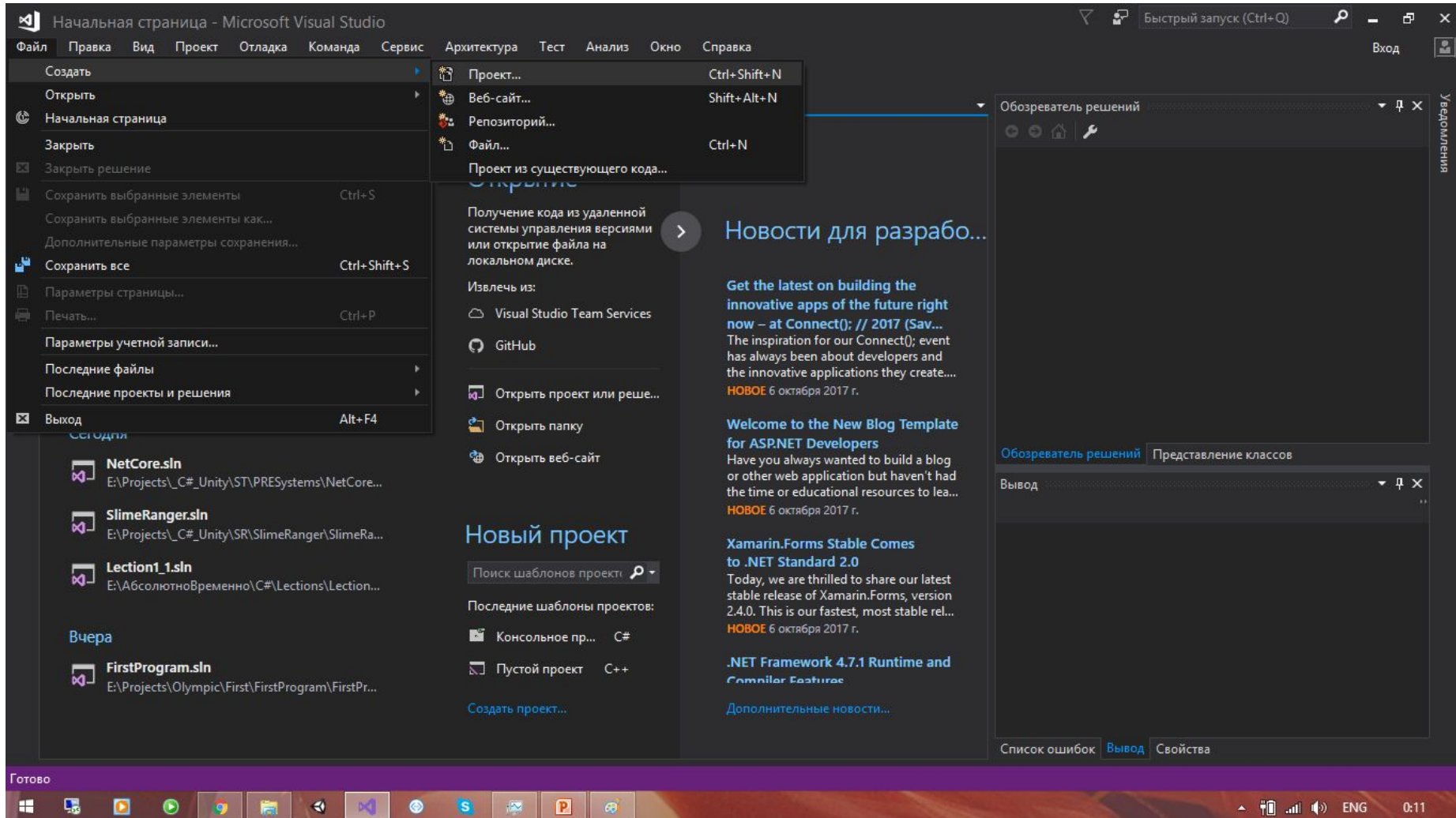
# Только C#

# MSDN

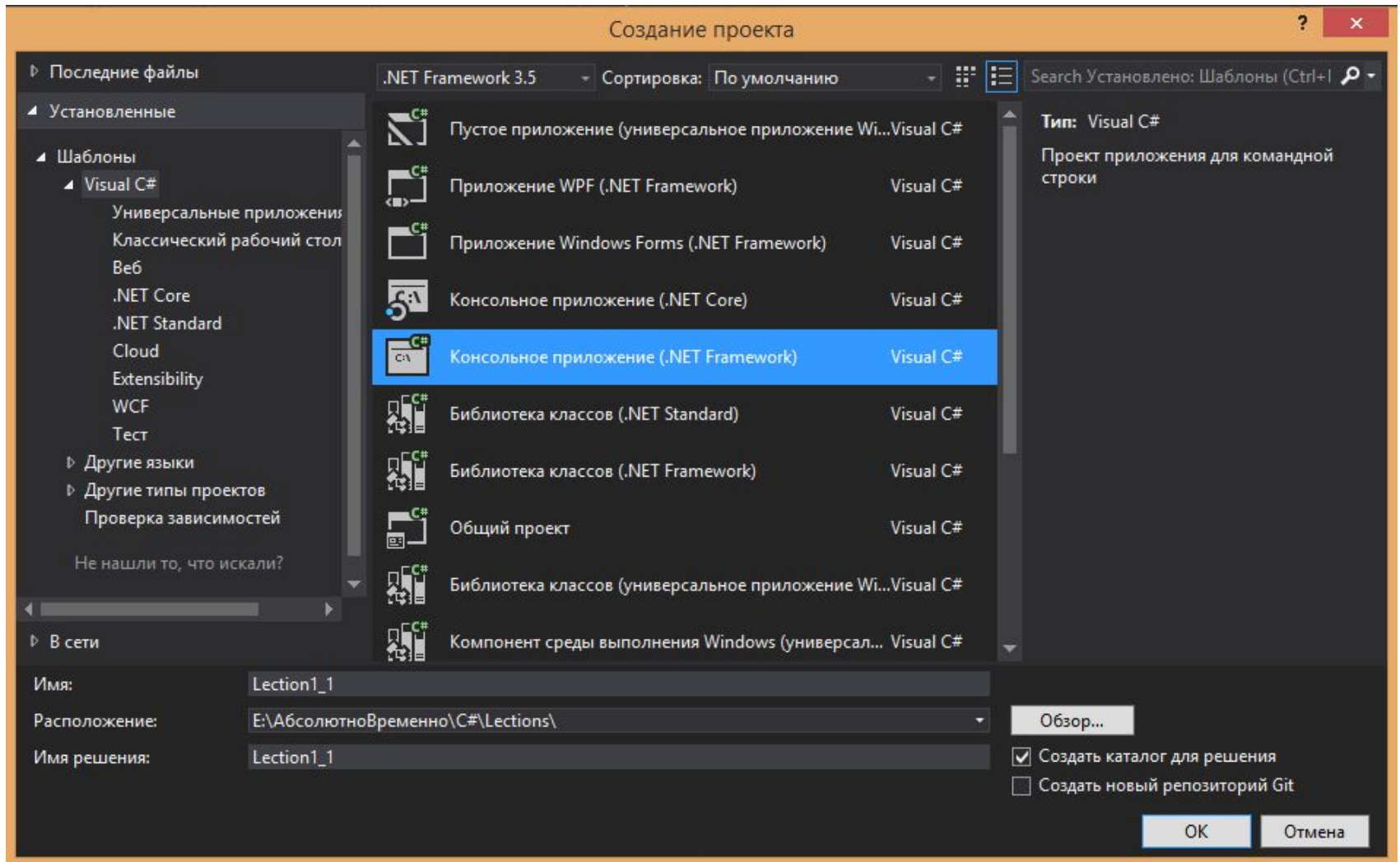


<https://msdn.microsoft.com/ru-ru/library/67ef8sbd%28v=vs.120%29.aspx>

# Начинаем!

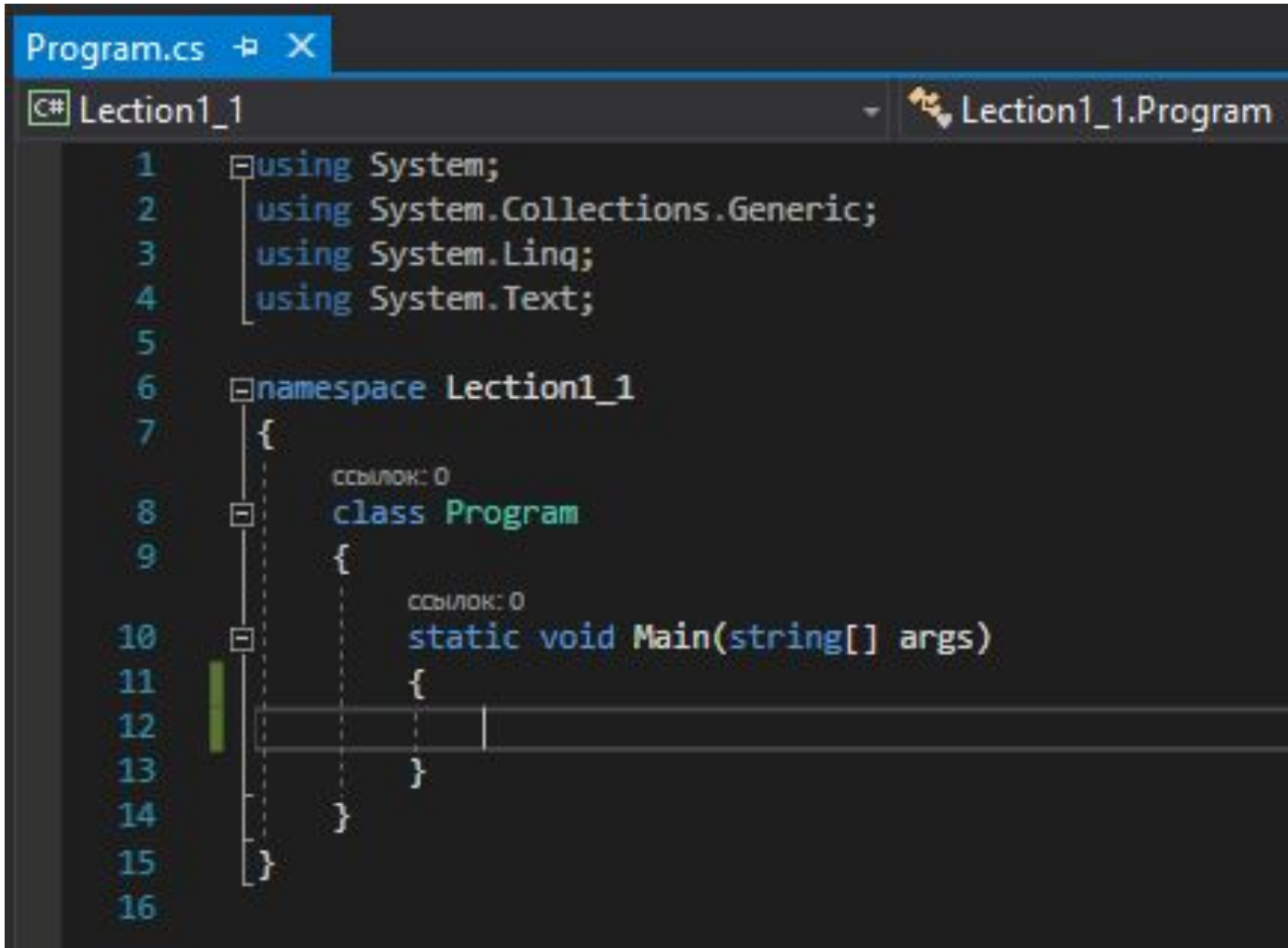


# Начинаем!



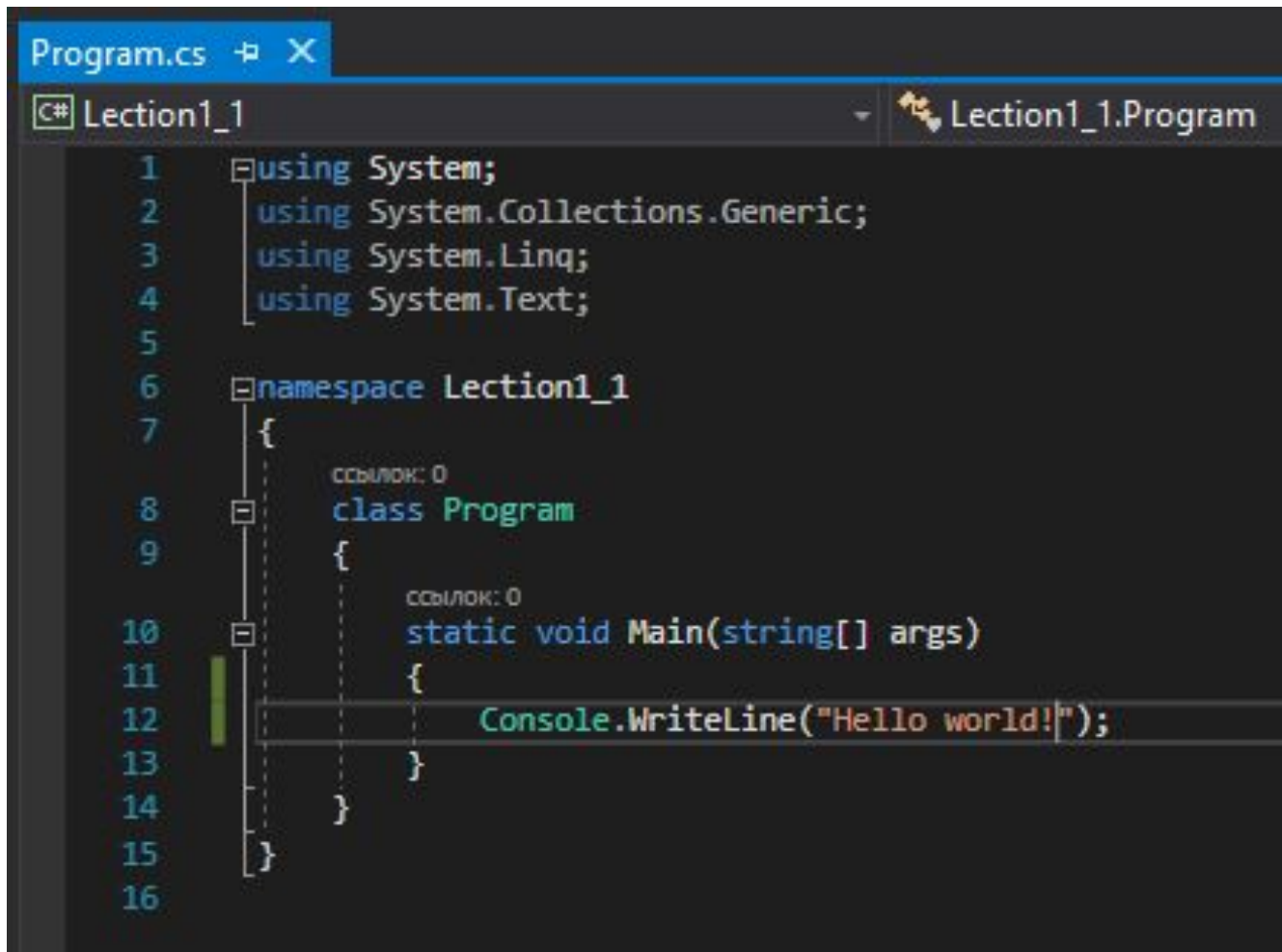


# Разбор созданного кода



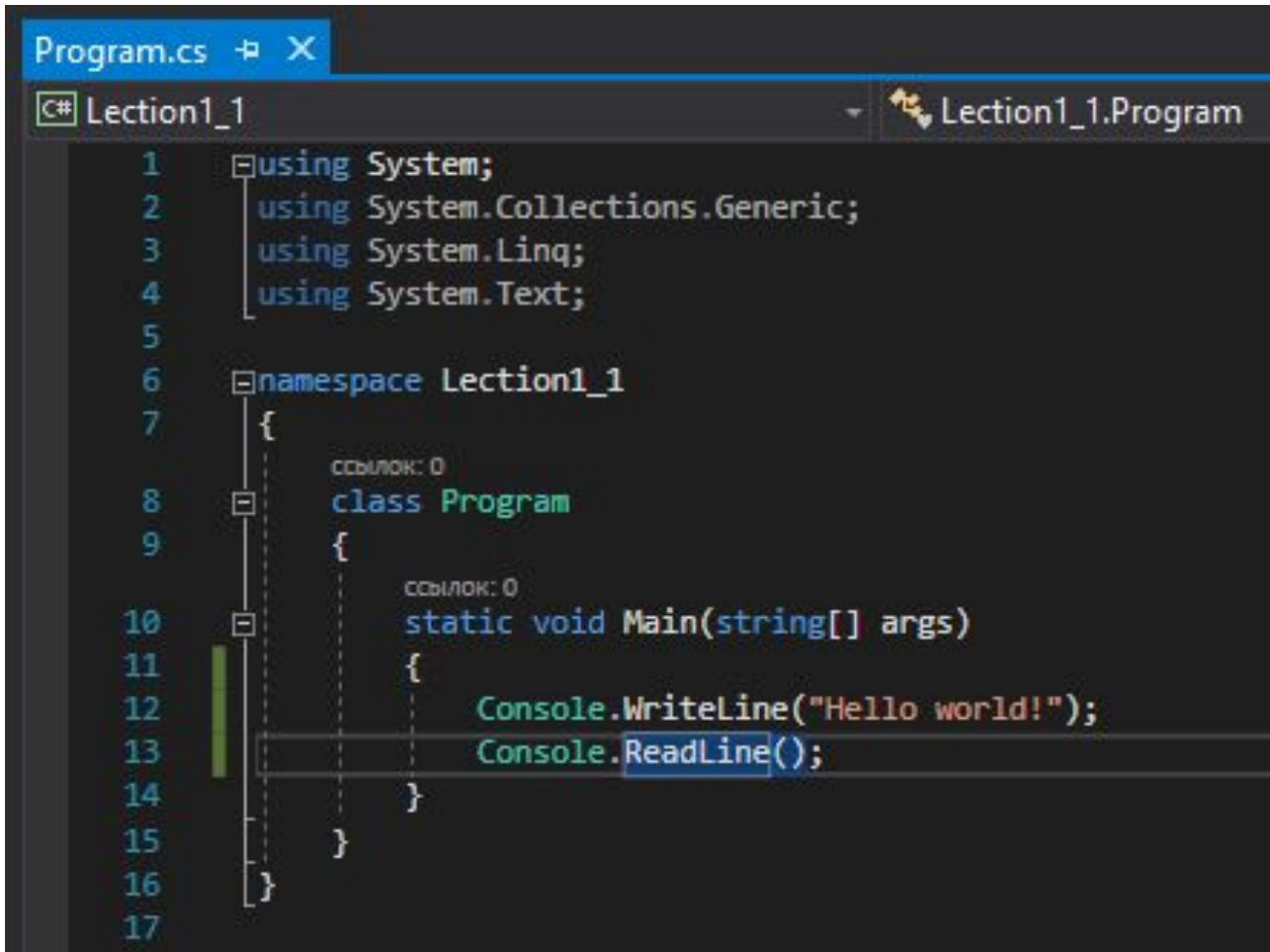
```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5
6  namespace Lektion1_1
7  {
8      class Program
9      {
10         static void Main(string[] args)
11         {
12         }
13     }
14 }
15
16
```

# Классика :)



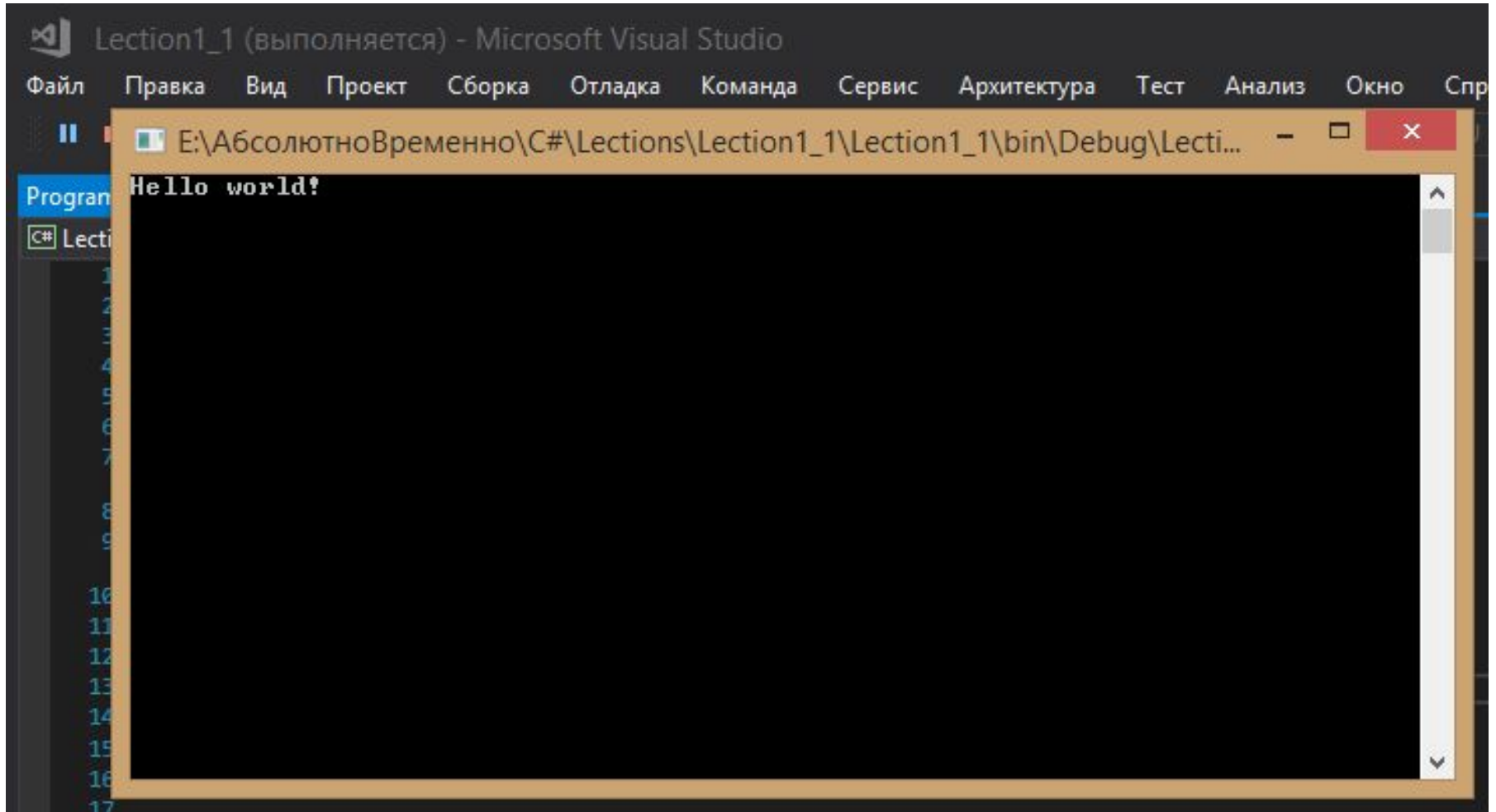
```
Program.cs [X]
C# Lection1_1 Lection1_1.Program
1  using System;
2      using System.Collections.Generic;
3      using System.Linq;
4      using System.Text;
5
6  namespace Lection1_1
7  {
8      class Program
9      {
10         static void Main(string[] args)
11         {
12             Console.WriteLine("Hello world!");
13         }
14     }
15 }
16
```

# Тест 2



```
Program.cs [X]
C# Lektion1_1 Lektion1_1.Program
1 using System;
2   using System.Collections.Generic;
3   using System.Linq;
4   using System.Text;
5
6 namespace Lektion1_1
7 {
8   class Program
9   {
10    static void Main(string[] args)
11    {
12      Console.WriteLine("Hello world!");
13      Console.ReadLine();
14    }
15  }
16 }
17
```

# Результат

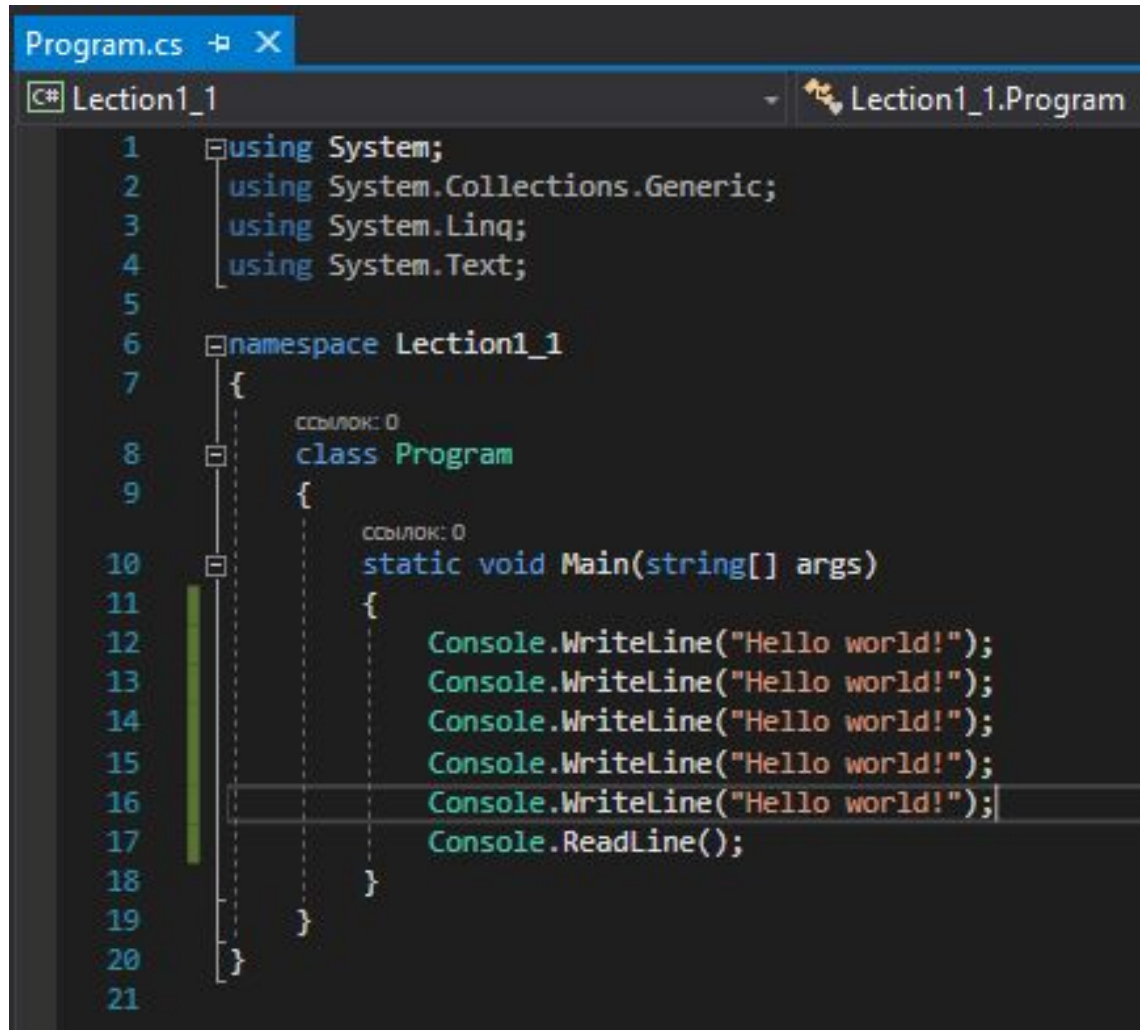


The image shows a screenshot of the Microsoft Visual Studio IDE. The title bar reads "Lecture1\_1 (выполняется) - Microsoft Visual Studio". The menu bar includes "Файл", "Правка", "Вид", "Проект", "Сборка", "Отладка", "Команда", "Сервис", "Архитектура", "Тест", "Анализ", "Окно", and "Спр". A console window is open, displaying the output "Hello world!". The console window title is "E:\АбсолютноВременно\C#\Lecti...". The background shows a C# code file with line numbers 1 through 17.

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17
```

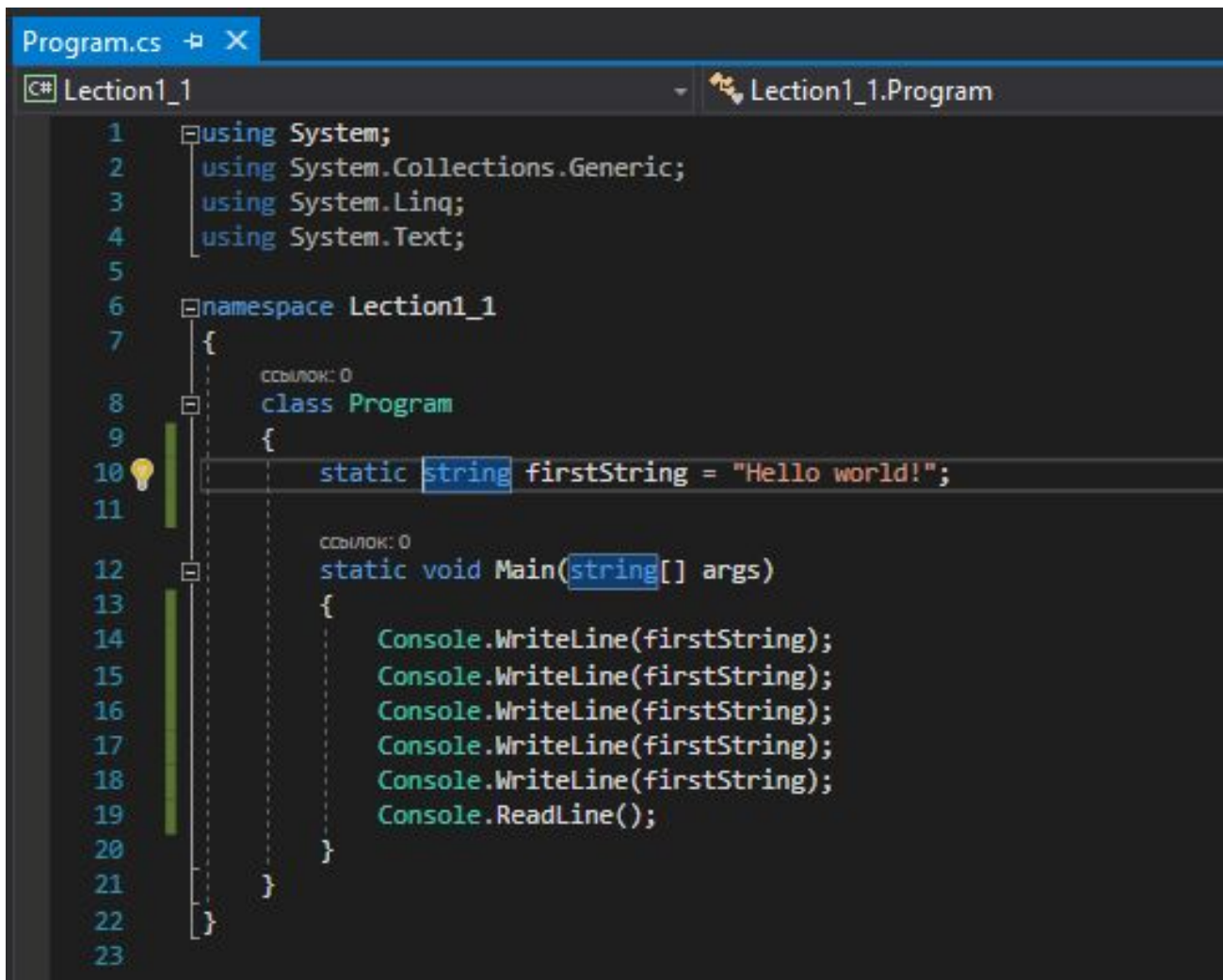
```
Program  
C# Lecti  
Hello world!
```

# Почему переменная?



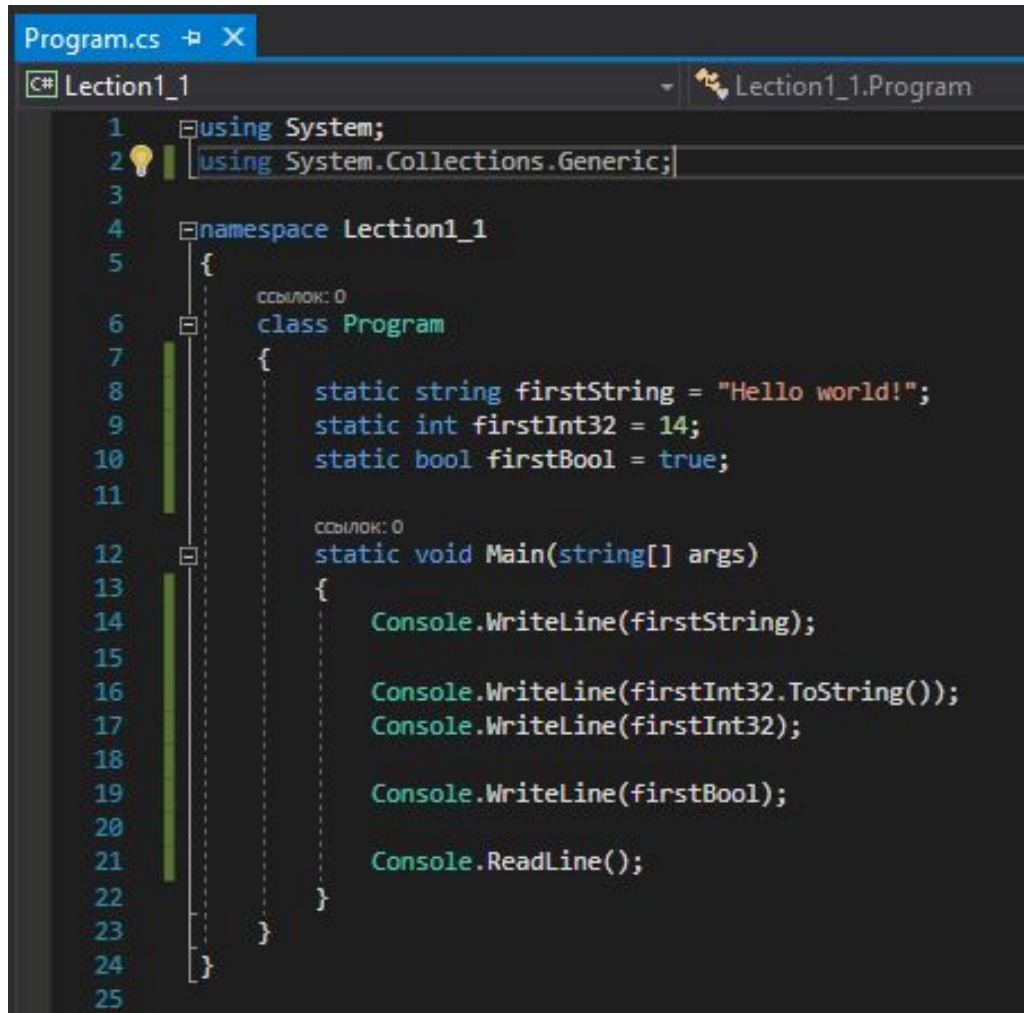
```
Program.cs  X
C# Lektion1_1  Lektion1_1.Program
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5
6  namespace Lektion1_1
7  {
8      class Program
9      {
10         static void Main(string[] args)
11         {
12             Console.WriteLine("Hello world!");
13             Console.WriteLine("Hello world!");
14             Console.WriteLine("Hello world!");
15             Console.WriteLine("Hello world!");
16             Console.WriteLine("Hello world!");
17             Console.ReadLine();
18         }
19     }
20 }
21
```

# Почему переменная?



```
Program.cs  ▸ ×
C# Lektion1_1  ▾  Lektion1_1.Program
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5
6  namespace Lektion1_1
7  {
8      class Program
9      {
10         static string firstString = "Hello world!";
11
12         static void Main(string[] args)
13         {
14             Console.WriteLine(firstString);
15             Console.WriteLine(firstString);
16             Console.WriteLine(firstString);
17             Console.WriteLine(firstString);
18             Console.WriteLine(firstString);
19             Console.ReadLine();
20         }
21     }
22 }
23
```

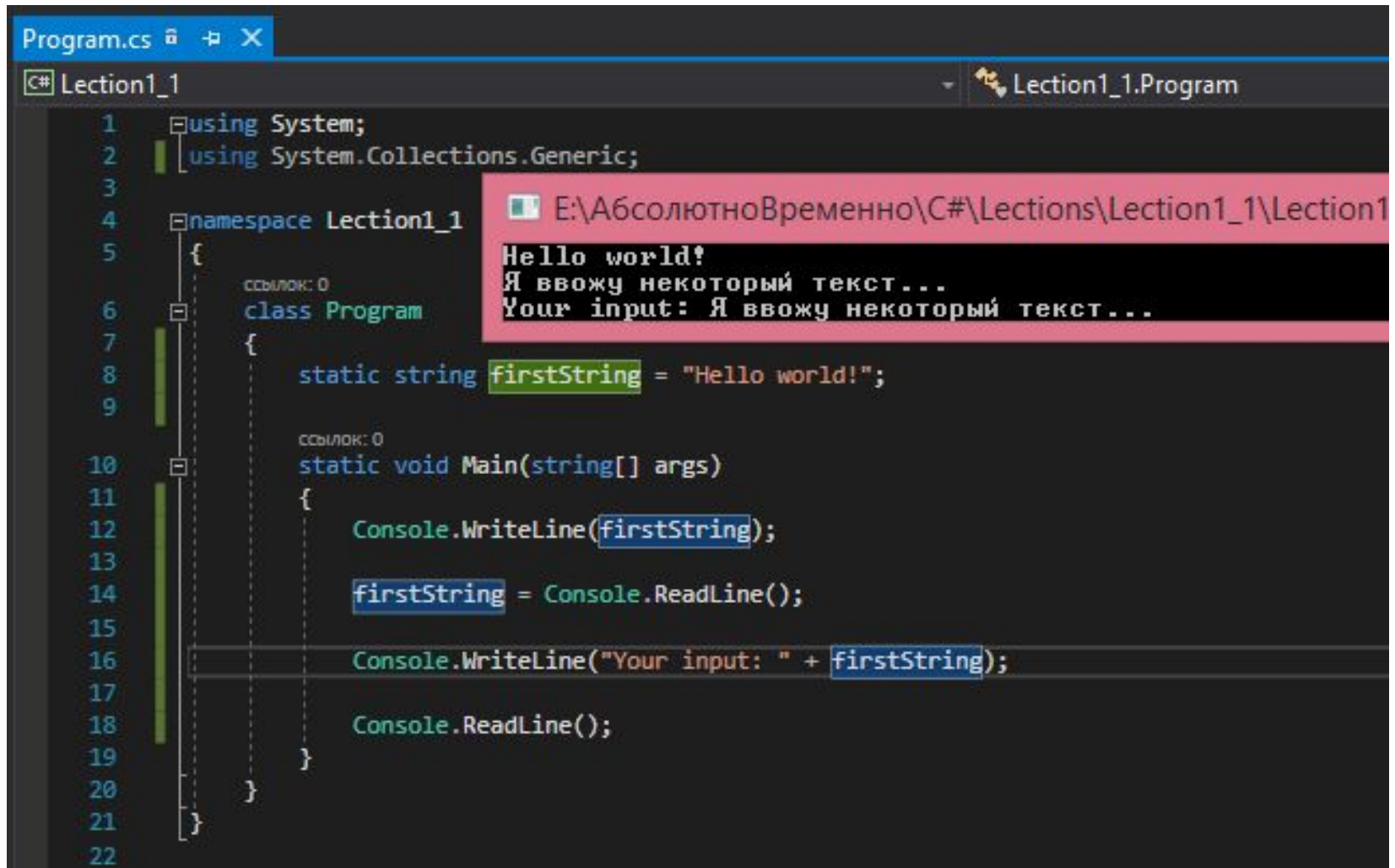
# ToString()



```
Program.cs [X]
C# Lection1_1 Lection1_1.Program
1 using System;
2 using System.Collections.Generic;
3
4 namespace Lection1_1
5 {
6     class Program
7     {
8         static string firstString = "Hello world!";
9         static int firstInt32 = 14;
10        static bool firstBool = true;
11
12        static void Main(string[] args)
13        {
14            Console.WriteLine(firstString);
15
16            Console.WriteLine(firstInt32.ToString());
17            Console.WriteLine(firstInt32);
18
19            Console.WriteLine(firstBool);
20
21            Console.ReadLine();
22        }
23    }
24 }
25
```



# ReadLine()



```
Program.cs [C#] Lektion1_1 Lektion1_1.Program
1 using System;
2 using System.Collections.Generic;
3
4 namespace Lektion1_1
5 {
6     class Program
7     {
8         static string firstString = "Hello world!";
9
10        static void Main(string[] args)
11        {
12            Console.WriteLine(firstString);
13
14            firstString = Console.ReadLine();
15
16            Console.WriteLine("Your input: " + firstString);
17
18            Console.ReadLine();
19        }
20    }
21 }
22
```

E:\АбсолютноВременно\C#\Lectons\Lektion1\_1\Lektion1\_1\Program.cs

```
Hello world!
Я ввожу некоторый текст...
Your input: Я ввожу некоторый текст...
```



# УСЛОВИЯ

```
if (true)
{
  ...
}
```

# ЦИКЛЫ

```
for (int i = 0; i < firstString.Length; i++)
{
  Console.WriteLine(firstString[i]);
}
```

char string[int index]

# УСЛОВИЯ

```
if (true)
{
  ...
}
```

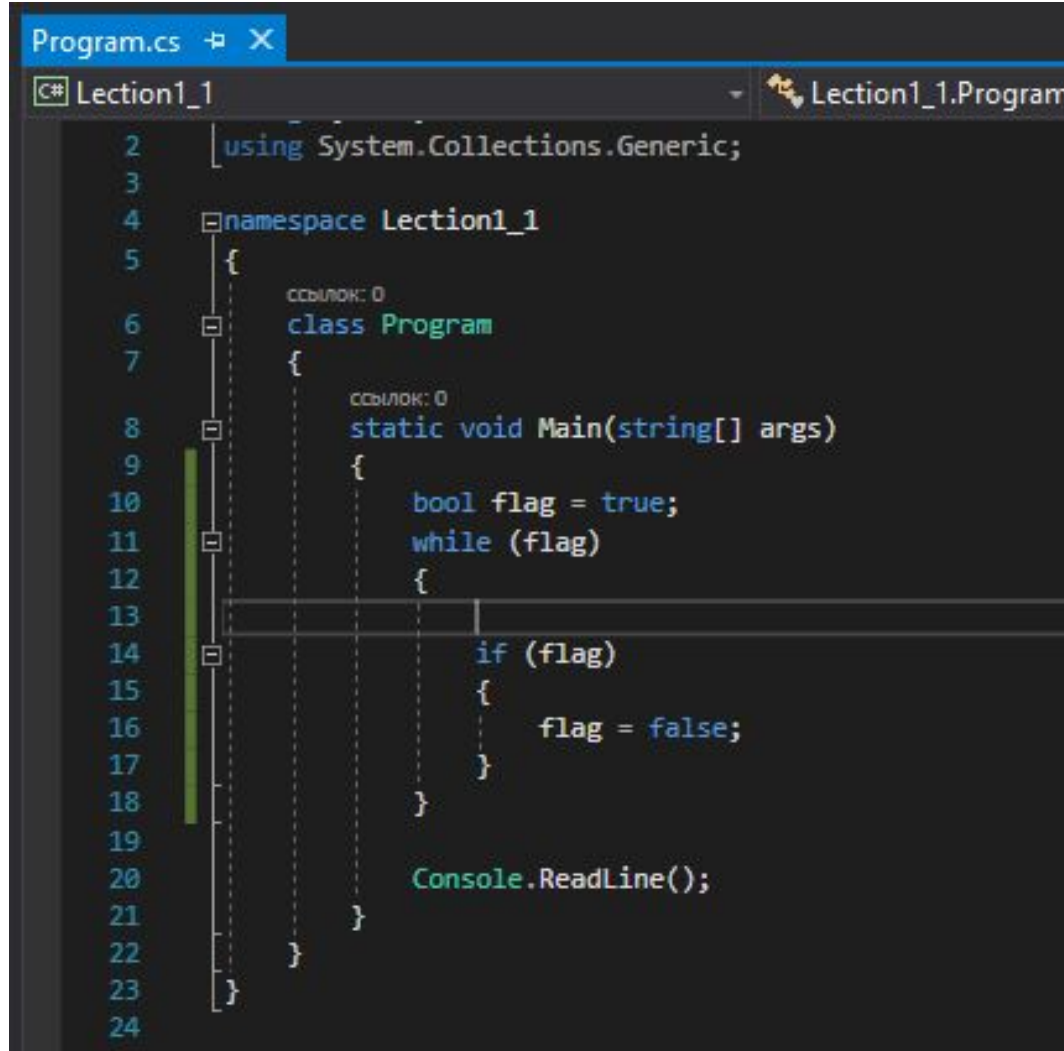
Program.cs

C# Lection1\_1

Lection1\_1.Program

```
1 using System;
2 using System.Collections.Generic;
3
4 namespace Lection1_1
5 {
6     class Program
7     {
8         static void Main(string[] args)
9         {
10             bool a = true;
11             bool b = false;
12             int u = 26;
13             //bool c = u > 0; // c равен true
14             if (a != b || b || (b && u < 0))
15             {
16                 Console.WriteLine("Я вывожу значение...");
17             }
18
19             Console.ReadLine();
20         }
21     }
22 }
23
```

# While без do

A screenshot of the Visual Studio code editor showing a C# program. The code is in a file named Program.cs. It includes a namespace Lection1\_1 and a class Program. The Main method contains a while loop that runs as long as a boolean flag is true. Inside the loop, there is an if statement that sets the flag to false. The program also includes a Console.ReadLine() call.

```
Program.cs [X]
[C#] Lection1_1 Lection1_1.Program
2  using System.Collections.Generic;
3
4  namespace Lection1_1
5  {
6      class Program
7      {
8          static void Main(string[] args)
9          {
10             bool flag = true;
11             while (flag)
12             {
13                 if (flag)
14                 {
15                     flag = false;
16                 }
17             }
18
19             Console.ReadLine();
20         }
21     }
22 }
23
24
```

# While c do

```
Program.cs # X
[C#] Lection1_1 Lection1_1.Program
1 using System;
2 using System.Collections.Generic;
3
4 namespace Lection1_1
5 {
6     class Program
7     {
8         static void Main(string[] args)
9         {
10             bool flag = false;
11             do
12             {
13                 Console.WriteLine("Сначала делай потом думай...");
14             } while (flag);
15
16             Console.ReadLine();
17         }
18     }
19 }
20
```

# For

```
static void Main(string[] args)
{
    string text = "HelloWorld";
    int i = 0;

    while (i < text.Length)
    {
        Console.WriteLine(text[i]);
        i++;
    }

    Console.ReadLine();
}
```

char string  
Возвраща  
index: Поэ

```
static void Main(string[] args)
{
    string text = "HelloWorld";

    for (int i = 0; i < text.Length; i++)
    {
        Console.WriteLine(text[i]);
    }

    Console.ReadLine();
}
```

# Foreach

```
static void Main(string[] args)
{
    string text = "HelloWorld";

    foreach (char c in text)
    {
        Console.WriteLine(c);
    }

    Console.ReadLine();
}
```

Интерфейс IEnumerable

Интерфейс IEnumerator

using System.Collections

# String

```
static void Main(string[] args)
{
    string text = "HelloWorld";

    for (int i = 0; i < text.Length; i++)
    {
        Console.WriteLine(text[i]);
    }

    Console.ReadLine();
}
```



# String

```
ссылка: 0
static void Main(string[] args)
{
    string text = "HelloWorld";

    text.
}
Conso
```

- GetEnumerator
- GetHashCode
- GetType
- GetTypeCode
- IndexOf**
- IndexOfAny
- Insert
- IsNormalized
- LastIndexOf

`int string.IndexOf(char value) (+ 8 перегрузки)`  
Возвращает индекс первого вхождения указанного знака Юникода в данной строке.

# Массивы

```
static int _anyInt1 = 1;  
static int _anyInt2 = 2;  
static int _anyInt3 = 3;  
  
static int[] _anyInts = new int[] { 1, 2, 3, 4, 5 };
```

# Обычные массивы

```
class Program
{
    static int[] _anyInts = new int[] { 1, 2, 3, 4, 5 };

    static int[] _simpleLengthArray = new int[5];

    ССЫЛОК: 0
    static void Main(string[] args)
    {
        Console.ReadLine();
    }
}
```

```
class Program
{
    static string[] _notInitArray = null;

    ССЫЛОК: 0
    static void Main(string[] args)
    {
        int arrayLen = int.Parse(Console.ReadLine());

        _notInitArray = new string[arrayLen];

        for (int i = 0; i < _notInitArray.Length; i++)
        {
            _notInitArray[i] = Console.ReadLine();
        }

        Console.WriteLine();

        for (int i = 0; i < _notInitArray.Length; i++)
        {
            Console.WriteLine(_notInitArray[i]);
        }

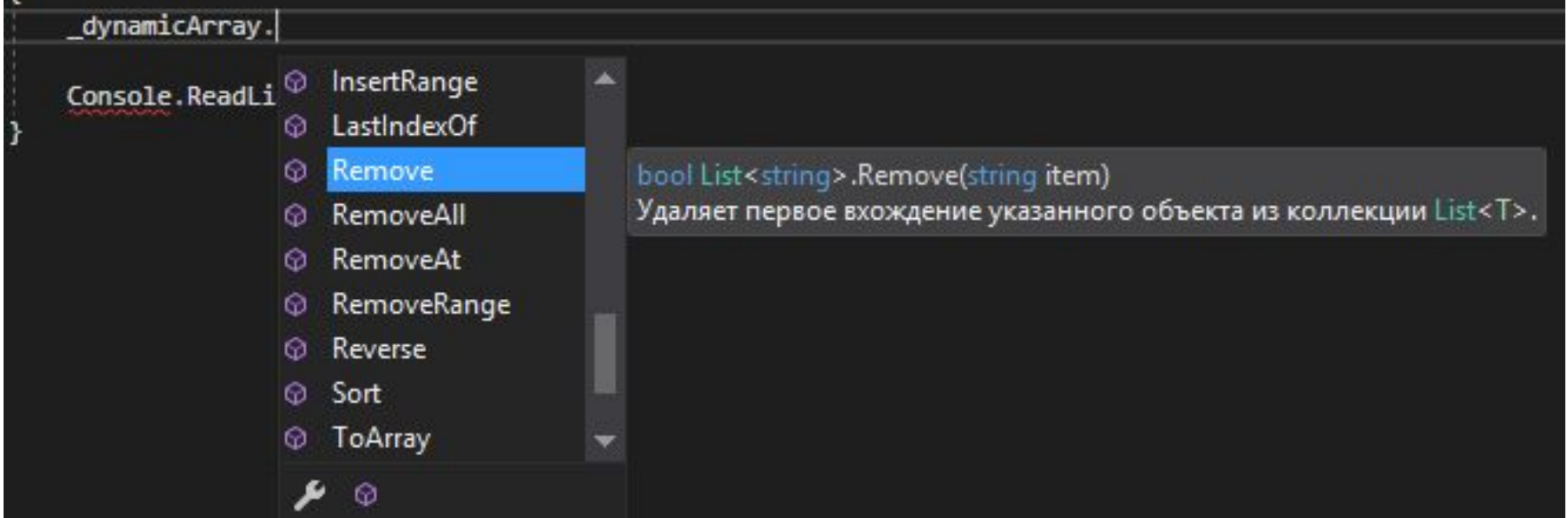
        Console.ReadLine();
    }
}
```

# Динамические массивы

```
Program.cs [X]
C# Lektion1_1 Lektion1_1.Program
1 using System;
2 using System.Collections.Generic;
3
4 namespace Lektion1_1
5 {
6     class Program
7     {
8         static List<string> _dynamicArray = new List<string>();
9
10        static void Main(string[] args)
11        {
12            while (true)
13            {
14                _dynamicArray.Add(Console.ReadLine());
15
16                if (_dynamicArray[_dynamicArray.Count-1].ToLower() == "exit")
17                {
18                    break;
19                }
20            }
21
22            Console.WriteLine("Конец считывания");
23
24            Console.ReadLine();
25        }
26    }
}
```

# Методы List'a

```
static List<string> _dynamicArray = new List<string>();  
  
ссылка: 0  
static void Main(string[] args)  
{  
    _dynamicArray.  
    Console.ReadLine  
}
```



The screenshot shows the Visual Studio IDE with a code editor and a class member list. The code defines a static `List<string>` named `_dynamicArray` and a `Main` method. The `_dynamicArray` property is selected, and the class member list is open. The `Remove` method is highlighted in blue. The tooltip for `Remove` is displayed on the right, showing the signature `bool List<string>.Remove(string item)` and the description: "Удаляет первое вхождение указанного объекта из коллекции List<T>."

`bool List<string>.Remove(string item)`  
Удаляет первое вхождение указанного объекта из коллекции List<T>.

Всё! :)

# API

# JSON Serialise

```
Product product = new Product();
product.Name = "Apple";
product.Expiry = new DateTime(2008, 12, 28);
product.Sizes = new string[] { "Small" };

string json = JsonConvert.SerializeObject(product);
// {
//   "Name": "Apple",
//   "Expiry": "2008-12-28T00:00:00",
//   "Sizes": [
//     "Small"
//   ]
// }
```



# JSON Deserialise

```
string json = @"{
    'Name': 'Bad Boys',
    'ReleaseDate': '1995-4-7T00:00:00',
    'Genres': [
        'Action',
        'Comedy'
    ]
}";

Movie m = JsonConvert.DeserializeObject<Movie>(json);

string name = m.Name;
// Bad Boys
```

# JSON



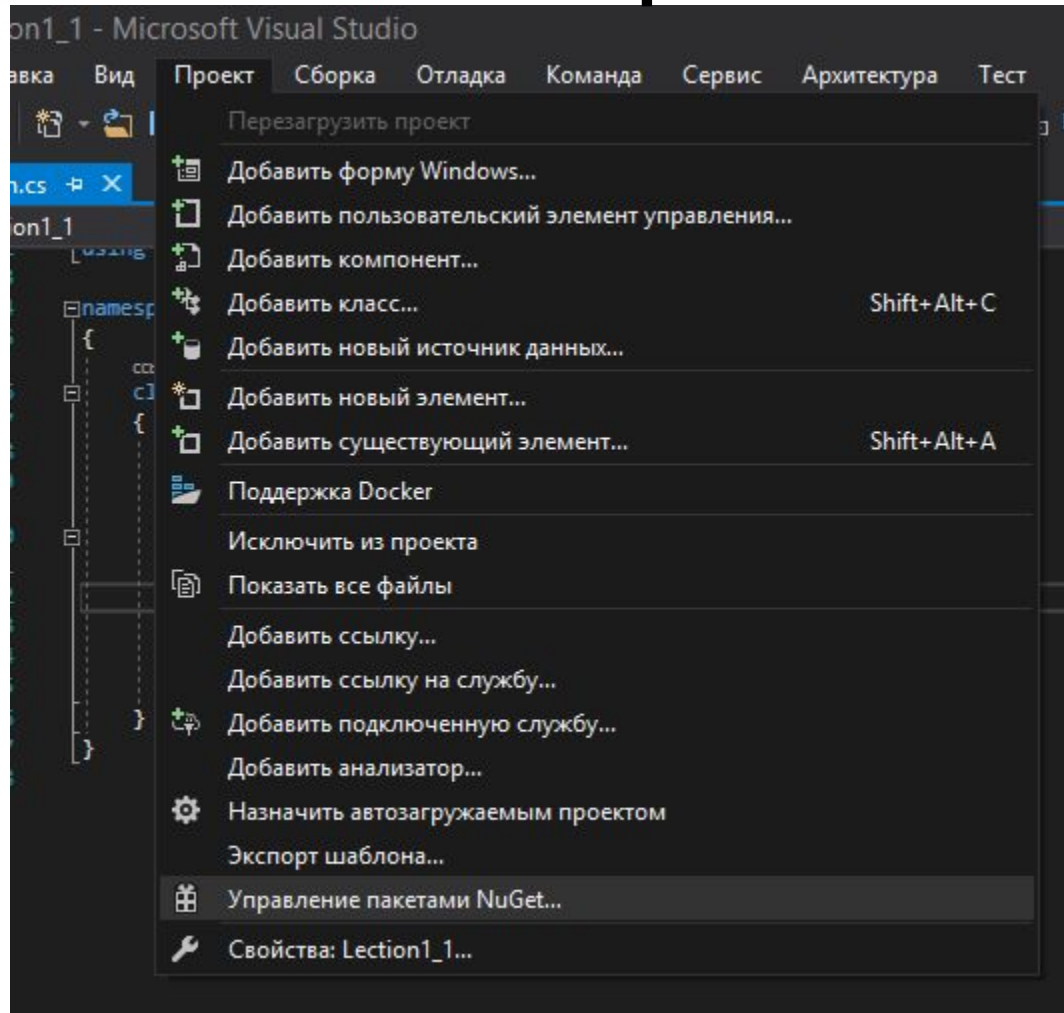
<https://www.newtonsoft.com/json>

# XML



[https://msdn.microsoft.com/ru-ru/library/system.xml.xmldocument\(v=vs.110\).aspx](https://msdn.microsoft.com/ru-ru/library/system.xml.xmldocument(v=vs.110).aspx)

# Импорт



# Импорт

