**Homework: Introduction to Programming**

[**Submit homework in bgcoder**](http://bgcoder.com/Contests/314/CSharp-Fundamentals-01-Introduction-to-Programming)

**Problem List**

1. [**Play with Visual Studio**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/01.%20Play%20with%20VS)

## Description

* Install **Visual Studio** on your laptop or home computer. Go to the official [Visual Studio](https://www.visualstudio.com/) site and download the**Community 2015** version.
* Start Visual Studio and familiarize yourself with it. Create a simple C# program (console application), compile and run it.

## Submission

* You do not have to submit anything for this problem

1. [**Blank Solution**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/02.%20Blank%20Solution)

## Description

* Create a blank solution in Visual Studio called “Intro-Programming-Homework”. use this solution to hold all your homework projects, code and files. For each problem (exercises) add a separate project with self-descriptive name like**Hello-World** and **Print-Your-Name**.

## Submission

* You do not have to submit anything for this problem

1. [**Play with MSDN Library**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/03.%20Play%20with%20MSDN)

## Description

* Play with [Microsoft Developer Network (MSDN)](http://msdn.microsoft.com/library) Library Documentation.
  + Find information about Console.WriteLine() method in MSDN.
  + Find information about Console.ReadLine() method in MSDN.
  + Find information about the Console class.
  + Find information about the class keyword.

## Submission

* You do not have to submit anything for this problem

1. [**Hello World**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/04.%20Hello%20World)

## Description

Create, compile and run a **Hello World** application - it should print the string Hello, C#! on the console.

## Input

* There is no input for this task.

## Output

* Print Hello, C#! on the console.

## Constraints

* Time limit: **0.1s**
* Memory limit: **16MB**

## Submission

* Submit your code [here](http://bgcoder.com/Contests/Compete/Index/314" \l "0)

1. [**Print Name**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/05.%20Print%20Name)

## Description

* Create a C# application that print your name on the console.
* Ensure you have named the application well (e.g. “PrintMyName”).

## Submission

* You do not have to submit anything for this problem

1. [**Print Numbers**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/06.%20Print%20Numbers)

## Description

* Write a program that prints the numbers **1**, **101** and **1001**, each on a separate line. Submit the code at the contest in[www.bgcoder.com](http://bgcoder.com/Contests/314/CSharp-Fundamentals-01-Introduction-to-Programming).

## Input

* There is no input for this task.

## Output

* You program should print the numbers **1**, **101** and **1001** on three separate lines.

## Constraints

* Time limit: **0.1s**
* Memory limit: **16MB**

## Submission

* Submit your code [here](http://bgcoder.com/Contests/Compete/Index/314" \l "1)

1. [**Print First and Last Name**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/07.%20First%20and%20Last%20Name)

## Description

* Create console application that prints your first and last name, each at a separate line.

## Submission

* You do not have to submit anything for this problem

1. [**Square root**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/08.%20Square%20Root)

## Description

* Write a program that calculates the square root of the number 12345 and prints it on the console.

## Input

* There is no input for this task.

## Output

* Write a single number on the console - the square root of the number **12345**.

## Constraints

* Time limit: **0.1s**
* Memory limit: **16MB**

## Submission

* Submit your code [here](http://bgcoder.com/Contests/Compete/Index/314" \l "2)

1. [**Print Sequence**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/09.%20Print%20Sequence)

## Description

* Write a program that prints the first 10 members of the sequence: 2, -3, 4, -5, 6, -7, ...

## Input

* There will be no input for this task.

## Output

* Print on the console the first 10 members of the sequence from the description. Print each member on a separate line.

2

-3

4

-5

...

## Constraints

* Time limit: **0.1s**
* Memory limit: **16MB**

## Submission

* Submit your code [here](http://bgcoder.com/Contests/Compete/Index/314" \l "3)

1. [**Format Code**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/10.%20Format%20Code)

## Description

* Reformat the following C# code to make it readable according to the C# best practices for code formatting. Change the casing of the identifiers in the code (e.g. use PascalCase for the class name): **HorribleCode.cs**
  + You do not have to submit anything for this problem.

using

System;

class hoRRiblEcoDe

{

static

void

Main()

{

Console.

WriteLine("Hi, I am horribly formatted program"

); Console.

WriteLine("Numbers and squares:")

; for (int i = 0;

i < 10;

i++)

{

Console.WriteLine(i +

" --> " + i

\*

i);

}

}

}

## Submission

* You do not have to submit anything for this problem

1. [**Programming Languages**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/11.%20Programming%20Languages)

## Description

* Perform a research (e.g. in Google or Wikipedia) and provide a short list with information about the most popular programming languages. How similar are they to C#? How do they differ from C#?
* Write in a text file called **programming-languages.txt** at least five languages along with 2-3 sentences about each of them. Use English.

## Submission

* You do not have to submit anything for this problem

1. [**Development Environments**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/12.%20Development%20Environments)

## Description

* Perform a research (e.g. in Google or Wikipedia) and provide a short list with popular development environments (**IDE**s) like Visual Studio.
* Write in a text file called **list-of-IDEs.txt** at least five IDEs along with 2-3 sentences about each of them. Use English.

## Submission

* You do not have to submit anything for this problem

1. [**C# and .NET Differences**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/13.%20C#%20and%20.NET)
2. [**Current Date and Time**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/14.%20Current%20Date%20and%20Time)

## Description

* Create a console application that prints the current date and time. Find out how in Internet.

## Submission

* You do not have to submit anything for this problem

1. [**Age**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/15.%20Age)

## Description

Write a program that reads your birthday(in the format MM.DD.YYYY) from the console and prints on the console how old you are you now and how old will you be after 10 years.

## Input

* The input will always consist of a single line - a birthdate.

## Output

* You should print two lines with one number on the each line:
  1. How old are you now, on the first line.
  2. How old will you be after 10 years, on the second line.

## Constraints

* The date read from the console will always be in a valid DateTime format.
* All dates will be earlier than 2017.
* Time limit: **0.1s**
* Memory limit: **16MB**

## Sample Tests

| **Input** | **Output** |
| --- | --- |
| 03.05.2016 | 0 10 |
| 05.16.1994 | 21 31 |

## Submission

* Submit your code [here](http://bgcoder.com/Contests/Compete/Index/314" \l "4)

1. [**Print Long Sequence**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/16.%20Long%20Sequence)

## Description

* Write a program that prints the first 1000 members of the sequence: 2, -3, 4, -5, 6, -7, …
* You might need to learn how to use loops in C# (search in Internet).

## Input

* There is no input for this task.

## Output

* Output the first 1000 members of the sequence, each on a separate line.

2

-3

4

-5

6

...

## Constraints

* Time limit: **0.1s**
* Memory limit: **8MB**

## Submission

* Submit your code [here](http://bgcoder.com/Contests/Compete/Index/314" \l "5)

1. [**Play with the VS Debugger**](https://github.com/TelerikAcademy/CSharp-Part-1/blob/master/Topics/01.%20Introduction-to-Programming/homework/17.%20Play%20with%20VS%20Debugger)

## Description

* Write a program that prints at the console the numbers from 1 to 1000, each at a separate line.
* You might need to learn how to use loops (search in Internet).
* Set a breakpoint in the line, which prints the next number in the Visual Studio code editor. Run the program through the debugger using the [F5] key. When the debugger stops at the breakpoint trace the code execution with [F10] key.

## Submission

* You do not have to submit anything for this problem

<https://github.com/TelerikAcademy/CSharp-Part-1/tree/master/Topics/01.%20Introduction-to-Programming/homework>