**Chapter 1**

1. Install and make yourself familiar with **Microsoft Visual Studio** and Microsoft Developer Network (**MSDN**) Library Documentation. **√**
2. Find the description of the **System.Console** class in the standard .NET API documentation (MSDN Library).   **√**
3. Find the description of the **System.Console.WriteLine()** method and its different possible parameters in the MSDN Library. **√**
4. **Compile and execute** the sample program from this chapter using the command prompt (the console) and Visual Studio. **√**
5. **Modify** the sample program to print a different greeting, for example "Good Day!".

{

Console.WriteLine("Hello to you"); }

**6.** Write a console application that **prints your first and last name** on the console.

{ Console.WriteLine("Ermira Njaki"); }

**7.** Write a program that **prints the following numbers** on the console 1, 101, 1001, each on a new line.

{

Random random = new Random();

for (int i = 0; i < 10; i++)

{

Console.WriteLine(random.Next(100,1001));

}

Console.ReadLine();

}

**8.** Write a program that prints on the console the **current date and time**.

{

DateTime now = DateTime.Now;

Console.WriteLine(now);

Console.ReadKey();

}

**9.** Write a program that prints the **square root of 12345**.

{

double val1 = 12345;

Console.WriteLine(Math.Sqrt(val1));

}

**10.**  Write a program that prints the first 100 members of the **sequence** 2, -3, 4, -5, 6, -7, 8.

{

for (int i = 2; i <= 8; i++)

{

if (i % 2 == 1)

{

int j = -i;

Console.WriteLine(j);

}

else

Console.WriteLine(i);

}

Console.ReadLine();

}

**11.** Write a program that reads your age from the console and prints your **age after 10 years**.

{

Console.Write("Write your current age:");

int age = Convert.ToInt32(Console.ReadLine());

Console.Write("Your age after 10 years is:");

age = age + 10;

Console.Write("{0} ", age);

}

**12.** Describe the difference between **C#** and the **.NET Framework**.

C# vs .Net are two of the important language and framework artifacts in the Software Development Industry. C# is basically a simple yet modern multi-paradigm object-oriented programming language. It was initially developed by Microsoft within its own.Net framework initiative. .Net is basically a type of Microsoft developed framework that mainly works on Microsoft Windows. It is basically a reusable type of libraries that can be implemented for the development of different applications.

**13.** Make a list of the **most popular programming** languages. How are they different from C#?

Most popular programming languages in 2021 are: Python,JavaScript,Java,C#...

Microsoft developed C# as a faster and more secure variant of C. It is fully integrated with Microsoft’s .NET software framework, which supports the development of applications for Windows, browser plug-ins, and mobile devices. C# offers shared codebases, a large code library, and a variety of data types.

**14. Decompile** the example program from exercise 5. **√**

**Chapter 2**

**1.**    **Declare several variables** by selecting for each one of them the most appropriate of the types **sbyte**, **byte**, **short**, **ushort**, **int**, **uint**, **long** and **ulong** in order to assign them the following values: 52,130; -115; 4825932; 97; -10000; 20000; 224; 970,700,000; 112; -44; -1,000,000; 1990; 123456789123456789.

// Declare some variables

ushort week = 52130;

sbyte oneweek = -115;

ulong hours = 4825932;

byte centuries = 97;

short name = -10000;

int surname = 20000;

byte city = 224;

short namesurname = 970;

short right = 970;

short left = 700;

sbyte top = 000;

short bottom = 112;

sbyte infront = -44;

int leftside = -1;

ulong behind = 123456789123456789;

// Print the result on the console

Console.WriteLine(week);

Console.WriteLine(oneweek);

Console.WriteLine(hours);

Console.WriteLine(centuries);

Console.WriteLine(name);

Console.WriteLine(surname);

Console.WriteLine(city);

Console.WriteLine(namesurname);

Console.WriteLine(right);

Console.WriteLine(left);

Console.WriteLine(top);

Console.WriteLine(bottom);

Console.WriteLine(infront);

Console.WriteLine(leftside);

Console.WriteLine(behind);

**2**.Which of the following values can be assigned to variables of type **float**, **double** and **decimal**: 5, -5.01, 34.567839023; 12.345; 8923.1234857; 3456.091124875956542151256683467?**.**

float Emri = 5f;

float mbiemri = -5.01f;

double adresa = 34.567839023;

float numri = 12.345f;

double kontakt = 8923.1234857;

decimal portfolio = 3456.091124875956542151256683467M;

Console.WriteLine ( Emri );

Console.WriteLine(mbiemri);

Console.WriteLine(adresa);

Console.WriteLine(numri);

Console.WriteLine(kontakt);

Console.WriteLine(portfolio);

**2.**Write a program, which **compares correctly** **two real numbers** with accuracy at least **0.000001**.