**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.

using System;

namespace exercise1Chapter2

{

class Program

{

static void Main()

{

ushort number1 = 52130;

sbyte number2 = -115;

uint number3 = 4825932;

byte number4 = 97;

short number5 = -10000;

short number6 = 20000;

byte number7 = 224;

uint number8 = 970700000;

sbyte number9 = 112;

sbyte number10 = -44;

int number11 = -1000000;

ushort number12 = 1992;

long number13 = 123456789123456789;

}

}

}

**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?

using System;

namespace exercise2Chapter2

{

class Program

{

static void Main(string[] args)

{

float numri1 = 5f;

float numri2 = -5.01f;

double numri3 = 34.567839023;

double numri4 = 8923.1234857;

decimal numri5 = 3456.091124875956542151256683467M;

Console.WriteLine(numri1);

Console.WriteLine(numri2);

Console.WriteLine(numri3);

Console.WriteLine(numri4);

Console.WriteLine(numri5);

}

}

}

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

using System;

namespace exercise3Chapter2

{

class Program

{

static void Main(string[] args)

{

decimal number1 = 10.000001m;

decimal number2 = 10.000003m;

Console.WriteLine(number1.Equals(number2));

}

}

}

**4. Initialize** a variable of type **int** with a value of 256 in  
**hexadecimal** format (256 is 100 in a numeral system with base 16).

using System;

namespace exercise4Chapter2

{

class Program

{

static void Main(string[] args)

{

int number = 0x100;

Console.WriteLine(number);

}

}

}

**5.** Declare a variable of type **char** and assign as a value the character, which has **Unicode** code, 72 (use the Windows calculator in order to find hexadecimal representation of 72).

using System;

namespace exercise5Chapter2

{

class Program

{

static void Main(string[] args)

{

char character = '\u0072';

Console.WriteLine(karakteri);

}

}

}

**6.**  Declare a variable **isMale** of type **bool**and assign a value to it depending on your gender.

using System;

namespace exercise6Chapter2

{

class Program

{

static void Main(string[] args)

{

bool isMale = false;

Console.WriteLine(isMale);

}

}

}

**7.**  Declare two variables of type **string** with values "Hello" and "World". Declare a variable of type **object**. Assign to this variable the value obtained of concatenation of the two string variables (add space if necessary). Print the variable of type **object**.

using System;

namespace exercise7Chapter2

{

class Program

{

static void Main(string[] args)

{

string var1 = "hello";

string var2 = "world";

object obj = var1 + ' ' + var2;

Console.WriteLine(obj);

}

}

}

**8.**  Declare two variables of type **string** and assign them values "Hello" and "World". Declare a variable of type **object** and assign to it the value obtained of concatenation of the two variables of type **string** (do not miss the space in the middle). Declare a third variable of type **string** and initialize it with the value of the variable of type **object** (you should use type casting).

using System;

namespace exercise8Chapter2

{

class Program

{

static void Main(string[] args)

{

string string1 = "Hello";

string string2 = "World";

object object1 = string1 + " " + string2;

string string3 = object1.ToString();

Console.WriteLine(string3);

}

}

}

**9.**  Declare two variables of type **string** and assign them a value “**The "use" of quotations causes difficulties.**” (without the outer quotes). In one of the variables use quoted string and in the other do not use it.

using System;

namespace exercise9Chapter2

{

class Program

{

static void Main(string[] args)

{

string string1 = "The \"use\" of quotations causes difficulties.";

string string2 = "The " + "\u0022" + "use" + "\u0022" + " of quotations causes difficulties.";

Console.WriteLine(string1);

Console.WriteLine(string2);

}

}

}

**10.** Write a program to print a figure in the shape of a **heart** by the sign "**o**".

using System;

namespace exercise10Chapter2

{

class HeartFromSymbolO

{

static void Main()

{

char o = 'o';

Console.WriteLine(" " + o + o + o + " " + o + o + o);

Console.WriteLine(" " + o + " " + o + " " + o + " " + o);

Console.WriteLine(o + " " + o + " " + o);

Console.WriteLine(o + " " + " " + " " + o);

Console.WriteLine(o + " " + " " + " " + o);

Console.WriteLine(" " + o + " " + " " + o);

Console.WriteLine(" " + o + " " + " " + o);

Console.WriteLine(" " + o + " " + " " + o);

Console.WriteLine(" " + o + " " + " " + o);

Console.WriteLine(" " + o + " " + o);

Console.WriteLine(" " + o);

}

}

}

**11.**  Write a program that prints on the console **isosceles triangle** which sides consist of the copyright character "**©**".

using System;

namespace exercise11Chapter2

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine(" ©");

Console.WriteLine(" © ©");

Console.WriteLine(" © ©");

Console.WriteLine(" © ©");

Console.WriteLine("©©©©©©©©©");

}

}

}

**12.**  A company dealing with marketing wants to keep a data record of its **employees**. Each record should have the following characteristic – first name, last name, age, gender (‘m’ or ‘f’) and unique employee number (27560000 to 27569999). **Declare appropriate variables** needed to maintain the information for an employee by using the appropriate data types and attribute names.

using System;

namespace exercise12Chapter2

{

class Program

{

static void Main(string[] args)

{

string firstName = "Korab";

string lastName = "Duklini";

byte age = 18;

char gender = 'm';

int id = 31234561;

Console.WriteLine("First name of employee: " + firstName);

Console.WriteLine("Last name of employee: " + lastName);

Console.WriteLine("Age of employee: " + age);

Console.WriteLine("Gender of employee: " + gender);

Console.WriteLine("Id of employee: " + id);

}

}

}

**13.** Declare two variables of type **int**. Assign to them values 5 and 10 respectively. **Exchange (swap) their values** and print them.

using System;

namespace detyra13

{

class Program

{

static void Main(string[] args)

{

int number1 = 5;

int number2 = 10;

int number3;

number3 = number1;

number1 = number3;

Console.WriteLine(number1);

Console.WriteLine(number2);

}

}

}