# Week 1

Console.WriteLine("Hello world!");

**namespace** HelloWorld

{

**class** Program

{

**static** void Main(string[] args)

{

Console.WriteLine("Hello world!");

}

}

}

Press Ctrl + F5 (the Ctrl key and F5 key at the same time) to run your program

pressing F5 (for Start) or Ctrl+F5 (for Start without debugging)

# Week 2

## 1.2 Constants, assignment and arithmetic

Suppose the following statements were placed in the Main method of a different C# program. What would happen as the program is executed?

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | const int PRIME = 31;  const int DIVISOR = 3;  int a, b;  a = PRIME;  b = 2;  a = (a + b) / DIVISOR; |

int height = 176; *//height in cm*

double mass = 67.4; *//mass in kg*

double bmi;

bmi = mass/Math.Pow(height/100.0, 2);

Console.Write("Calculating BMI using height of " + height + " cm "); //176

Console.WriteLine("and weight of " + mass + " kg."); //67.4

Console.WriteLine("BMI: " + bmi); //21.758780…

## Console.ReadLine()

string name;

Console.Write("Enter your name: ");

name = Console.ReadLine();

Console.WriteLine("Name is " + name);

string name;

int age;

string country;

Console.Write("Enter your name: ");

name = Console.ReadLine();

Console.WriteLine("Enter your age: ");

age = Int32.Parse(Console.ReadLine());

Console.WriteLine("Enter your cousntry: ");

country = Console.ReadLine();

Console.WriteLine("Name is " + name);

Console.WriteLine("Age is " + age);

Console.WriteLine("country is " + country);

n = Int32.Parse(Console.ReadLine());

if (n % 2 == 0)

{

n = n/2;

}

else

{

n = n \* 3 + 1;

}

Console.WriteLine(n);

## Nested ifs

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14 | int x = 10;  int y = 5;  int result = 0;  **if** (x % y == 0) {  result = 1;  **if** (x < y) {  result = 2;  } **else** {  result = 3;  }  } **else** {  result = 4;  } |

## Switch

string day;

string message;

Console.Write("What day is it today? ");

day = Console.ReadLine();

**switch** (day.ToLower())

{

**case** "sunday": message = "Time for the weekly shopping"; **break**;

**case** "monday": message = "I hate Mondays - Garfield"; **break**;

**case** "tuesday": message = "Only four more days to go"; **break**;

**case** "wednesday": message = "Middle of the week!"; **break**;

**case** "thursday": message = "Will there be thunder later?"; **break**;

**case** "friday": message = "TGIF!"; **break**;

**case** "saturday": message = "It's the weekend!"; **break**;

**default**: message = "I don't understand what day of the week '" + day + "' is."; **break**;

}

Console.WriteLine(message);

## Loop

int[] counts={1,0,5,7,4,2,1};

for (int i = 0; i <= 6; i++)

{

Console.WriteLine("{0} | {1}", i, counts[i]);

}

int[] counts={1,0,5,7,4,2,1};

for (int i = 0; i <= 6; i++)

{

Console.Write("{0} | ",i);

for (int j = 1; j <= counts[i]; j++)

{

Console.Write('\*');

}

Console.WriteLine();

}

## While

int n;

Console.Write("Enter a positive integer: ");

n = Int32.Parse(Console.ReadLine());

**while** (n != 1)

{

Console.WriteLine("n is " + n);

**if** (n % 2 == 0) *//n is even*

{

n = n / 2;

}

**else**

{

n = 3 \* n + 1;

}

}

Console.WriteLine("The final value of n is " + n);