# Exercises about variables

* Solve them in Visual Studio or use <https://dotnetfiddle.net/>.
* Use one solution, with multiple projects in it.

## Exercise 01.01

* Define a variable with a good name of type “byte”.
* Initialise this variable with a number.
* Show the value of the variable in the console.

## Exercise 01.02

* Build on the result of 01.01 or restart.
* Add now 17 to the variable (value becomes + 17).
* Show the current value of the variable in the console.

## Exercise 01.03

* Build on the result of 01.02 or restart.
* Add to the variable the value of itself.
* Show the current value of the variable in the console.

## Exercise 01.04

* Build on the result of 01.03 or restart.
* Suppose you had given the variable the number 200 as initial value.
* What would be the result of exercise 01.04?

## Exercise 01.05

* Build on the result of 01.03 or restart.
* Define a new variable with another good name of type “string”.
* Give the variable a certain text value.
* Show the value of the variable in the console.

## Exercise 01.06

* Build on the result of 01.05 or restart.
* You have a variable of the type string.
* You have a variable of the type byte.
* Try to add them and show the result on the console.
* What happens?

## Exercise 01.07

* Start a new project.
* Define two variables of the type “bool”.
* Give them a good name.
* One variable gets the value “True”.
* The other variable gets the value “False”.
* Show both values in the same line to the console in this format:
  + First: True – Second: False
* If you change the values of the boolean, the console text shown must be correct.
  + An example
    - First: False – Second: False

## Exercise 01.08

* Build on the result of 01.07 or restart.
* You have 2 boolean variables with its values.
* Show the value of the 2 boolean used with operator “Or”.

## Exercise 01.09

* Build on the result of 01.08 or restart.
* You have 2 boolean variables with its values.
* Show the value of the 2 boolean used with operator “And”.

## Exercise 01.10

* Build on the result of 01.08 or restart.
* You have 2 boolean variables with its values.
* Show the value of the negation of your first boolean.

## Exercise 01.11

* Start a new project.
* Define two variables of the type “double”.
* Assign a decimal value to both.
* Add them together and show result.
* Subtract one from another and show result.
* Multiply them together and show result.
* Divide them and show result.

## Exercise 01.12

* Same exercise of above, but you give them both the value 0.
* What happens?

## Exercise 01.13

* Start a new project.
* Define two variables of the type “float”.
* Assign a decimal value to both.
* Add them together and show result.
* Subtract one from another and show result.
* Multiply them together and show result.
* Divide them and show result.

## Exercise 01.14

* Start a new project.
* Define two variables of the type “int”.
* Assign a value to both.
* Add them together and show result.
* Subtract one from another and show result.
* Multiply them together and show result.
* Divide them and show result.
  + Do you see the correct result?
  + Also when you divide 1 by 2?

## Exercise 01.15

* Start a new project.
* Define a variable of the type “decimal”.
* Give the variable a value with a lot of decimals.
* Show this to the console.
* Do you see the correct value?

## Exercise 01.16

* Start a new project.
* Define a variable of the type “double”.
* Give the variable a value with a lot of decimals.
* Show this to the console.
* Do you see the correct value?

## Exercise 01.17

* Start a new project.
* Try to define 2 variables with the same name.
* What happens?

## Exercise 01.18

* Start a new project.
* Define 3 variables with a good name of the type “int”.
* Ask on the screen to fill in those 3 numbers (e.g., 10 – 20 – 30).
* Show the biggest number to the console.
* Show the smallest number to the console.
* Show text “there are equals” if 2 or 3 numbers do have the same value.
* When not, show the text “They are all different”.