Practice Assignments Introduction Visual Studio and C#

Quiz questions, practical assignments and

answers to quiz questions

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# Quiz

Answers to the quiz-questions can be found in the last chapter.

## Question 1

Can you find 3 errors in the piece of code below (line numbers do not belong to the code, but are added to easily identify the lines with errors):

1 int myShoesize;

2 myShoesize = 44.5;

3 double myShoesize;

4 myShoesize = 39.5;

5 int double;

6 double = 44;

## Question 2

Consider the following piece of code:

List<int> numbers = new List<int>();

numbers.Add(7);

numbers.Add(4);

numbers.Add(25);

numbers.Insert(1, 99);

Mention, in correct order, the numbers stored in the List<int> after performing this piece of code.

## Question 3

What are the values of the variables div, remainder, x and y after running this piece of code:

int a = 97;

int b = 20;

int div = a / b;

int remainder = a % b;

int x = ((a / b) / b) / b;

int y = ((a % b) % b) % b;

## Question 4

What is the value of variable resultafter running this piece of code:

int myCapital;

myCapital = 45-10;

int myBanksCapital;

myBanksCapital = 9646104;

string result;

if ( myCapital + myBanksCapital > 1000000 )

{

result = "Together we are rich!";

}

else

{

result = "Poor us ! ! !";

}

## Question 5

What is the value of the variable sum after running this piece of code:

int sum = 0;

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

{

sum = sum + 3;

}

## Question 6

What is the value of the variable sum after running this piece of code:

int a = 0 ;

int sum = 0;

int blip = 10;

while ( a < 7 )

{

if (a % 2 == 0)

{

sum = sum + blip;

}

else

{

sum = sum + a;

}

a = a + 1;

}

## Question 7

What is the value of variable sumafter running this piece of code:

List<int> numbers = new List<int>();

numbers.Add(7); numbers.Add(4); numbers.Add(25); numbers.Insert(1, 99);

string sum = "";

foreach (int i in numbers)

{

if ( i >= 7 && i < 99 )

{

sum += i.ToString();

}

}

# Practical assignments: Classes & Objects

## Programming Assignment 1: Install Visual Studio

C:\Users\874156\Desktop\flatastic-icons-part-1-by-custom-icon-design\png\16x16\star-1_5.pngDifficulty:

### Case description

Install Visual Studio Enterprise on your laptop. Make sure you also register it with your product key. Installing will take some time so in the mean time you can start working on the other assignments via <https://dotnetfiddle.net/>

## Programming Assignment 2: Hello…

C:\Users\874156\Desktop\flatastic-icons-part-1-by-custom-icon-design\png\16x16\star-1_5.pngDifficulty:

The assignment covers the following learning goals:

* Understand how to use make use of variables

### Case description

Go to <https://dotnetfiddle.net/> and try to implement the following:

* Ask your user to supply his/her name
* Show the message "Hello <inputted name>"; for example: "Hello John Doe" where John Doe is the supplied name from the previous step.

## Programming Assignment 3: Odd or even

C:\Users\874156\Desktop\flatastic-icons-part-1-by-custom-icon-design\png\16x16\star-2_5.pngDifficulty:

The assignment covers the following learning goals:

* Understand how to use make use of variables
* Understand how to use an if-statements

### Case description

Go to <https://dotnetfiddle.net/> and try to implement the following:

* Ask your user to supply a whole number
* Determine whether the number is odd or even and show it in a message  
  (HINT: you can make use of the arithmetic operator % (remainder) to determine whether a number is odd or even) and show that as an output

## Programming Assignment 4: Extend demo

C:\Users\874156\Desktop\flatastic-icons-part-1-by-custom-icon-design\png\16x16\star-2_5.pngDifficulty:

The assignment covers the following learning goals:

* Understand how to use make use of variables
* Understand how to use a loop statement

### Case description

Go to <https://dotnetfiddle.net/> and try to implement the following:

* Ask your user to supply a base number
* Ask you user to supply how many multiplications to show
* Make use of these inputted values to show a multiplication table; can you make use of a for-statement to do this?   
  For example, when the base number is *5* and amount of multiplication is *9*, the output would be:  
  1 x 5 = 5  
  2 x 5 = 10  
  3 x 5 = 15  
  4 x 5 = 20  
  5 x 5 = 25  
  6 x 5 = 30  
  7 x 5 = 35  
  8 x 5 = 40  
  9 x 5 = 45

## Programming Assignment 5: Multiplication table

C:\Users\874156\Desktop\flatastic-icons-part-1-by-custom-icon-design\png\16x16\star-3_5.pngDifficulty:

The assignment covers the following learning goals:

* Understand how to use make use of variables and List<T>
* Understand how to use control statements

### Case description

Go to <https://dotnetfiddle.net/> and try to recreate/extend the demo where a user can supply numbers (see Figure 1: Example output from demo).

For this assignment you should show the following results:

* Average of all the numbers
* Highest number; in the example 9
* Lowest number; in the example 5
* Sum of all numbers; in the example 21
* Multiplication of all number; in the example 315

### Screenshots

Graphical user interface, text

Description automatically generated

Figure 1: Example output from demo

## Programming Assignment 6: Working with an array

|  |  |
| --- | --- |
|  | This assignment assumes the lecture about arrays has taken place. If it has not and you do not know arrays, you should wait after the lecture before attempting this assignment |

C:\Users\874156\Desktop\flatastic-icons-part-1-by-custom-icon-design\png\16x16\star-5_5.pngDifficulty:

The assignment covers the following learning goals:

* Understand how to use make use of variables
* Understand how to use make use of an array
* Understand how to use control statements

### Case description

Go to <https://dotnetfiddle.net/> and try to implement an application to ask for names and age for a registration (see Figure 2:Example of solution). For this application you have to use an array:

* First ask the user for how many persons (e.g. 3 persons)
* Then ask for the name and age for each of the persons (e.g. 3 times)
* Finally, show the inputted data where each person is on a new line

### Screenshots

Text

Description automatically generated

Figure :Example of solution

# Quiz answers

|  |  |
| --- | --- |
| Question | Answer |
| 1 | Line 2 (not possible to assign that value to an int-variable)  Line 3 (there is already a variable with that name)  Line 5 (double is a reserved word, cannot be used as identifier for a variable) |
| 2 | 7, 99, 4 , 25 |
| 3 | div = 4, remainder = 17, x = 0, y = 17 |
| 4 | "Together we are rich!" |
| 5 | sum = 30 |
| 6 | 49 ( = 10 + 1 + 10 + 3 + 10 + 5 + 10 ) |
| 7 | "725" |