

LAB 2

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Exercise 1: Write a C# program that prompts the user to input three integer values and find the greatest value of the three values.

Exercise 2: Write a C# program that determines a student's grade.

The program will read three types of scores (quiz score, mid-term score, and final score) and determine the grade based on the following rules:

- if the average score =90% =>grade=A
- if the average score >= 70% and <90% => grade=B
- if the average score>=50% and <70% =>grade=C
- if the average score<50% =>grade=F

Exercise 3: Write a C# program to detect key presses.

If the user pressed number keys(from 0 to 9), the program will display the number that is pressed, otherwise the program will show "Not allowed".

Exercise 4: Write a C# program that allows the user to choose the correct answer of a question.

See the example below:

What is the correct way to declare a variable to store an integer value in C#?

a. `int 1x=10;`

b. `int x=10;`

c. `float x=10.0f;`

d. `string x="10";`

Choose the answer letter: c

Incorrect choice!

Exercise 5: Write C# code to produce the output shown below:

**

*

Exercise 6: Write C# code to print the following pattern:

1*****

12*****

123*****

1234***

12345**

123456*

1234567

Exercise 7: Write C# program to prompt the user to choose the correct answer from a list of answer choices of a question.

The user can choose to continue answering the question or stop answering it. See the example below:

What is the command keyword to exit a loop in C#?

- a. int
- b. continue
- c. break
- d. exit

Enter your choice: b

Incorrect!

Again? press y to continue:

Exercise 8: Write C# program to print the table of characters that are equivalent to the Ascii codes from 1 to 122.

The program will print the 10 characters per line.

Exercise 9:

Functions: greeting + farewell

Objetive:

Create a program whose Main must be like this:

```
public static void Main()
{
    SayHello();
    SayGoodbye();
}
```

SayHello and SayGoodbye are functions that you must define and that will be called from inside Main.

Exercise 10:

Function with parameters

Objective:

Create a program whose Main must be like this:

```
public static void Main()
{
    SayHello("John");
    SayGoodbye();
}
```

SayHello and SayGoodbye are functions that you must define and that will be called from inside Main. As you can see in the example. SayHello must accept an string as a parameter.

Exercise 11:

Function returning a value

Objective:

Create a program whose Main must be like this:

```
public static void Main()
{
    int x= 3;
    int y = 5;
    Console.WriteLine( Sum(x,y) );
}
```

"Sum" is a function that you must define and that will be called from inside Main. As you can see in the example, it must accept two integers as parameters, and it must return an integer number (the sum of those two numbers).

Exercise 12:

Function sum of array

Objective:

Create a C# program to calculate the sum of the elements in an array. "Main" should be like this:

```
public static void Main()
{
    int[] example = {20, 10, 5, 2 };
    Console.WriteLine(
        __"The sum of the example array is {0}", __Sum(example));
}
}
```

Exercise 13:

Function Power, local variables

Objective:

Create a function named "Power" to calculate the result of raising an integer number to another (positive integer) number. It must return another integer number. For example. Power(2,3) should return 8.

Note: You MUST use a repetitive structure, such as "for " or "while", you cannot use Math.Pow.