



Algorithmic and Data Structures1 (ASD1)

Exercise Series N° 1

Exercise 1 :

Answer true or false:

1. *Microsoft* is a computer manufacturing company.
2. *Facebook* is made by a programming language.
3. Data and programs are stored in files.
4. We can design two different algorithms for the same problem.
5. I am a good programmer; so I can design an algorithm for any mathematical problem.
6. Hard is more important than soft.
7. If the algorithm is wrong, the result is wrong.
8. Algorithm testing is a very important phase in creating programs.
9. *Java* is a European social network.
10. The pseudo-code may vary slightly from one book (or teacher) to another.
11. There are algorithms that never end!
12. An algorithm can be written in Arabic.

Exercise 2 :

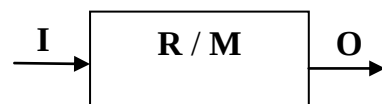
What property are we talking about in these phrases?

- This recipe can be cooked in any type of oven
- I tried this recipe but it only worked at over 90 degrees for 7 minutes
- Why does the chef insist on using a Calor oven?
- It was written in the method to use 3000 grams of flour, but I read it incorrectly as 300 grams
- I can reach the same place on foot in about the same time without having to use public transportation
- This process must be repeated 10 times to reach the desired result

Exercise 3:

Determine the inputs and outputs of the following algorithms by means of a diagram:

- Calculating a person's age.
- Getting a drink from a beverage vending machine.
- the sum of the digits of a number
- the binary representation of a decimal



Practical Work (TP)

1st step in programming

1. Create a source file and enter the following program:
2. Save the program under the name "MyFirstProg" and check the file extension.
3. Compile the program.
4. Correct (in the editor) any errors reported by the compiler.
5. Repeat steps 3 and 4 until the compilation process has been successfully completed.
6. Run the program.
7. Writing "Welkome" instead of "Welcome". Is it a programming error?
8. Use the copy-paste technique to display the word "Welcome" 10 times.
9. Use the "Replace" command (from the search menu) to display "Hello" instead of "Welcome".

```
#include <stdio.h>
int main() {
    printf("Welkome\n") ;
    return 0;
}
```