***First in: the work presented in this report is my own and the data was obtained by my lab partner and me during the lab period***

**Report**

In the first practical workshop taught by Professor Mr. Abdel Bacet Mhamdi, we started to start the pluto.jl environment and the Julia programming language, by definition: Pluto is a browser-based notepad interface for the Julia language. It makes it possible to present the Julia code and the calculation results in a closely linked way.

We first tested some basic instructions in the Julia programming language (language name, update of installed packs], execution of functions, method help? shell! …). To be precise, Julia is a high-level dynamic programming language, designed to give users the speed of C./C++ while remaining as easy to use as Python. This means developers can troubleshoot issues faster and more efficiently. We learned in the course that julia is characterized as a **dynamic language that is composable** and allows the creation of high-performance IT solutions. For this, it is based on numerical and statistical calculation techniques as well as on a very simple syntax.

For the pluto.jl environment, we started with exercises to understand the interface, starting with the creation of titles in precise form, then adding and processing text until solving a small mathematical problem (pizza) which is used to add a slider which defines a quantity and to display it as a message, in conclusion it is a whole successive instruction problem.

What I learned from pluto.jl is that it is a **reactive environment** because when modifying a function or a variable, Pluto automatically updates all the cells concerned, **lightweight** because Pluto is written in pure Julia and is easy to install.

Most important to me is that a Pluto notebook is made up of small blocks of Julia code (cells) and together they form a responsive notebook. When modifying a variable, Pluto automatically re-executes the cells that refer to it. Cells can even be placed in an arbitrary order – by definition: intelligent parsing determines dependencies between them and supports execution.

*Laboratory honor pledge*

*Imhamed boujemaa*