VG101 — Introduction to Computer and Programming

Worksheet (chapter 1)

Manuel — UM-JI (Fall 2018)

Worksheet concept

- Simple exercises based on the slides
- Optional personal work
- No submission, no grading
- Only refer to websites in English

Ex. 1 — *Napier's bones*

Read online about Napier's bones and write a clear algorithm that summarises this method.

Ex. 2 — *Reading*

Read online on the Linux OS and von Neumann architecture.

Ex. 3 — *Base conversions*

1. Convert from digit into binary and hexadecimal: 10, 245, 543211, 3095, 109.
2. Convert from binary into digit and hexadecimal: 111010101, 111, 10100111, 01011111100111101111100000001, 100111000011111.
3. Convert from hexadecimal into digit and binary: 14576ABC3333, AAABBB16487236, 17B, 9876EEB, ABCDE.
4. Write an algorithms to convert numbers from digit to binary.

Ex. 4 — *Programming languages*

Search online about the following languages and determine whether they are interpreted or compiled languages:

- Python;
- Perl;
- PHP;
- Bash;
- Java;
- Markdown;
- LaTeX;
- C#;
- Lisp;
- Assembly;
- Ada95;
- O'Caml;
- Pascal;
- Fortran;
- Ruby;
- Scala;
- Javascript;
- Haskell;
- Erlang;