VG101 — Introduction to Computer and Programming

Worksheet (chapter 5)

Manuel — UM-JI (Summer 2019)

Worksheet concept

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

Ex. 1 — *Slide questions*

Ensure you can answer all the questions appearing in chapter 5.

Ex. 2 — *Macros*

Decode and run the following program.

A simple macro

```
#define fosho def
#define kthx return
#define wutz print
fosho double(x):
kthx x * 2
wutz double(6)
```

Hint: to run it use Python.

Ex. 3 — *Basic C programming*

1. Using chapter 2, write a C program which returns the density of a body given its circumference and both the distance and period of a body orbiting around it. Read the data from the keyboard.
2. What variable(s) can be defined using `#define`? Adjust your code accordingly.

Ex. 4 — *Macro with low-level computation*

The *Xor swap algorithm* is an algorithm that swaps two values of distinct variables without using any temporary variable.

1. Write a `#define SWAP(a,b)` macro to swap two integers a and b.
2. Write a short C function to demonstrate the previous macro.