

CTT10009 – COMPUTER SYSTEM

Homework 1

HW1: Floating-point Representation

I. Information:

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|---------------------|-------------------------|
| Code: | HW1 |
| Deadline nộp bài: | |
| Form of submission: | Individual |
| Tool to submit: | Moodle |
| Supervisor: | Chung Thuy Linh |
| Email | ctlinh@fit.hcmus.edu.vn |

II. Outcome

After this exercise you will reach to:

- G3.1: Be able to understand the math of number systems (integer, floating-point) and how to store different type of data on the computer

III. Describe

A. Write a program (any language you familiar with) to adopt these requirements:

1. Input a double number **X**
2. Output the binary bit pattern of **X**

B. Write a program (any language you familiar with) to define new data_type

1. Read X from a file
Ex: file input.txt store a binary bit pattern of **X**:
00111111 11100000 00000000 00000000... 00000000

Note: 64 bits

2. Output the value in decimal of **X**
Ex: Output: 0.5

IV. Submission requirement:

1. Report [student_ID.pdf](#) is included:
 - a. Your idea: writing in mindmap/ workflow form/ pseudo code
 - b. The result when you run your program (capture the screen)
2. Source code: [student_ID_A.c](#) and [student_ID_B.c](#) (or .cpp file)
3. Please zip all files and submit to moodle site with the name **Student_ID.zip**