

EXAM 2 Information (EET 340)

Exam 2 Date: April 19th (Tuesday)

Exam 2 Syllabus: Chapter 3 (Arithmetic of Computers) (Lectures till 04-12-22)

Recommended study:

1. Study Homework~~3~~, Lab~~2~~, and Lab~~3~~ thoroughly.
2. Study class notes and chapter PPT thoroughly.

Question Pattern

- It will be altogether 6 questions
- This exam is closed book. You can use a calculator. However, you can write the necessary information/equations/formulas in a single piece of paper and bring it to the exam.

→ **Exam Procedure for Face-to-face Students:** Face to face students appear exam on the regular class time. You will have 60 minutes to complete this exam.

→ Exam Procedure for Online Students:

1. You need to download the file from the link provided, print and fill it out by answering the questions.
2. When you are finished, scan the completed document into a file and upload it into the drop box provided here.

Or, instead of 1 and 2, you can also write your solutions on paper, scan it and upload your solutions page by page.

④ 4. Exam 2 will be available to you from April 19th (Tuesday) 12.30 PM, and you need to complete your exam by April 20th (Wednesday) 12.30 PM (within 24 hours of receiving your exam).

5. You will have 70 minutes to complete this exam. Do not close the window or leave - this exam must be completed in one sitting.

6. If you have any issue regarding submission/access, call my phone (4099982301) anytime and email me.

2. Convert following floating-point values to IEEE-754 single precision format.
Convert the result in hexadecimal and show all the steps of calculation: a. 0.3125

$$0.3125 \times 2 = \boxed{0}.625$$

$$0.625 \times 2 = \boxed{1}.25 \rightarrow 0.0101$$

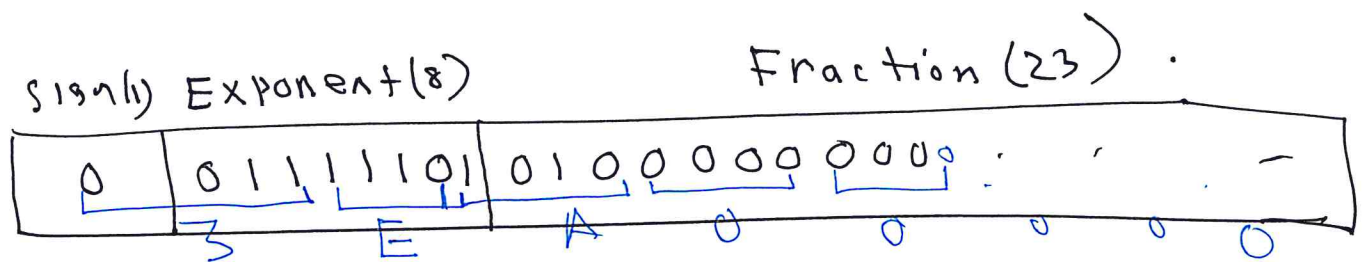
$$0.25 \times 2 = \boxed{0}.5 = \boxed{1.01} \times 2^{-2}$$

$$0.5 \times 2 = \boxed{1}.0$$

$$\text{Sign} = 0$$

$$\begin{aligned} \text{Exponent} &= \text{Actual Exponent} + \text{bias} \\ &= -2 + 127 \\ &= 125_{10} \\ &= 01111101_2 \end{aligned}$$

$$\text{Fraction} = 0.0100 \dots$$



$$\text{Hex} = 0x3EAO0000$$