Computer Systems – Study guide

UNIT 02. INFORMATION REPRESENTATION

Computer Systems
CFGS DAM/DAW

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Nomenclatura

A lo largo de este tema se utilizarán distintos símbolos para distinguir elementos importantes dentro del contenido. Estos símbolos son:

INDEX

UNIT 02. INFORMATION REPRESENTATION

1. DATA

From 03/10/2022 to 16/10/2022. The length of the unit is 2 weeks (12 hours).

2. PREVIOUS KNOWLEDGE

- How to perform basic mathematical operations.
- How to convert between two general units.

3. OBJECTIVES

1. To learn how the computer systems manage information.
2. To learn how to convert form decimal to binary, octal and hex.
3. To learn how to convert form binary, decimal, octal and hex.
4. To learn how to convert between octal and hex.
5. To learn how to perform basic mathematical operations in binary code: addition, subtraction, multiplication.

   > The division is not in the scope of the objectives.

6. To learn how to perform logical operations.
7. To learn how to represent negative numbers in binary code.
8. To learn how to represent real numbers in binary code.
9. To know how to represent alphabetic characters in binary code.
10. To know the information units.
11. To learn how to change information units.

4. CONTENTS

1. Numeral systems
2. Binary code
3. Operations with binary numbers
4. Negative numbers
5. Real numbers
6. Boolean algebra
7. Octal

8. Hexadecimal
9. Alphanumeric Representation
10. Numeric and alphanumeric data
11. Internal representation
12. Unit system

5. ACTIVITIES

It is very important to read the notes and perform the exercises. This exercises are not part of assessment, but note that it is very common to have several questions from this unit in the exam. The solutions will be published at the beginning of the week 3.

6. RECOMMENDATIONS

You have some pills (little videos) about how to perform some binary operations.

The TC of the week 2 will be exclusively dedicated to practice exercises, so it is very important to go there with the main concepts studied.