Abdelhafid Boussouf University Center, Mila Institute of Mathematics and computer science Department of Computer Science 2^{nd} Year Computer Science

Year: 2024/2025 Module: Computer Architecture

Directed Work N° 01

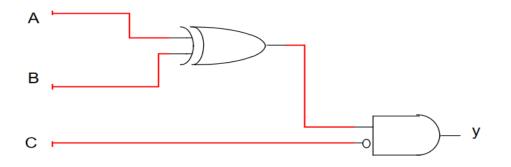
Exercice1:

Complete the conversion table:

| Decimal | Binary | Octal | Hexadecimal |
|---------|-----------|-------|-------------|
| 507 | | | |
| | 101000100 | | |
| | | | E1D |
| | | 743 | |

Exercice2:

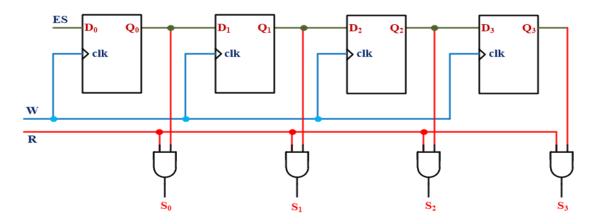
1. Show the truth table for the following logic circuit



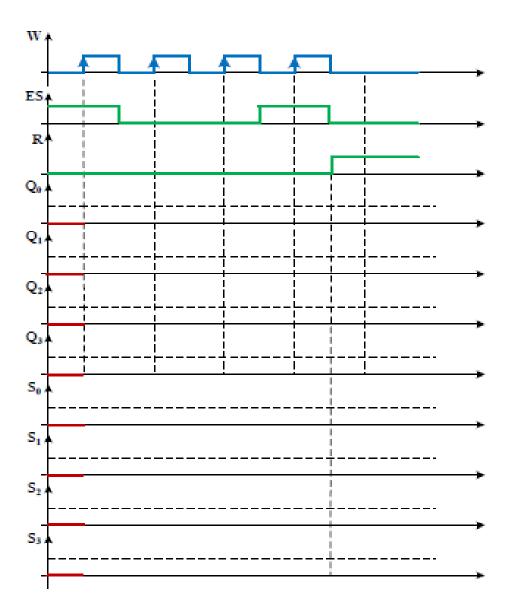
2. Write the Boolean equation for this circuit

Exercise 3:

Let consider the register given by the circuit below:



- 1. Specify the type of this register.
- 2. Complete the following timing diagram:



Exercice 4:

- 1- What are the characteristics of a register?
- 2- Indicate the different types of registers.
- 3- What is the main function of a PIPO register? What is it characterized by?

4- Consider a right shift register 4 bits type SISO whose initial content is 0000.What becomes its content after 6 clock pulses if it receives on its serial input the binary word 10101101?

5- Repeat the previous question for a left shift register.