ELET2570 – Assignment 1

Due: February 26, 2021 at 11:59 p.m.

Making an ALU

In this exercise you are required to build an Arithmetic-Logic Unit (ALU) on *Logisim*.

The specifications for the ALU are as follows:

Input Width:	8 bits
Output Width:	8 bits
ALU Operations:	ADD, OR, EOR, NOT, ADD, SUBTRACT, MULTIPLY, COMPARE

The ALU must also have a status register that stores the following flags:

Negative, **Z**ero, Carry and O**V**erflow

Each ALU operation implemented by a sub-circuit constructed with individual logic gates. These sub-circuits should be put together in one device called ALU with appropriately named inputs and outputs.

Submission:

You are required to submit two (2) separate files.

1. The finished ALU on Logisim should be named as follows:
   FirstName.LastNameALU.**circ**

2. Export the circuit diagrams of all sub-circuited components in a PDF in file named:
   FirstName.LastNameALU.**pdf**

Make a single ZIP file with your '.**circ**' and '**.pdf**' files. Upload your ZIP file to OURVLE by the aforementioned date and time.