CS2310: Foundations of Computer System Design Lab
August-November 2021 Semester
Assignment 5

Date: 21st September, 2021

Deadline for Submission: 11.59PM on 27th September, 2021

Design of an 8-bit ALU with specifications given separately.

Test cases for logical operations

- 1 pair of operands with X not equal to Y, for NOP

- 1 pair of operands with X equal to Y, for NOP

- 1 pair of operands for each logical operation (AND, OR, XOR)

Test cases for arithmetic operations:

1 pair of operands that does not result in an overflow for each of the following arithmetic operations:
- Unsigned addition

- Unsigned subtraction with X > Y

- Signed addition

- Signed subtraction

- Unsigned multiplication

- Signed multiplication

1 pair of operands that results in an overflow for each of the following arithmetic operations:
- Unsigned addition

- Signed addition

- Signed subtraction

- Unsigned multiplication

- Signed multiplication