# Lab 1: Xilinx Development Software

(2+2 hours)

## Goal

To learn how to use the Xilinx circuit design software to design and implement digital circuits.

## Procedure

Design a 2-1 Mux with the Xilinx software. Connect the input a, b, s to three switches. Connect the y output to an LED. Implement the circuit onto the FPGA board to test and verify that it works correctly.

1. Design it with AND/OR/NOT gate level Verilog description.
2. Design it with Boolean function Verilog description.
3. Design it with Always statement and if-else statement.
4. Design it with always statement and case statement.

Design 4-1 Mux by using hierarchy structure of the module 2-1 Mux designed above.