ECE 477 LAB 4

1) Matrix calculation in VHDL will be explained during the lab session. Download and open the sample project form the "*http://ece477.cankaya.edu.tr/course.php?page=12*".

$$[2 \quad 1] * \begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix} = [8 \quad 8]$$

2) Complete the example code in order to get full matrix multiplication result.

3) Modify the example code 1x3 array * 3x3 array form and do the related simulations.

$$[1 \quad 2 \quad 3] * \begin{bmatrix} 3 & 0 & 1 \\ 7 & 2 & 9 \\ 1 & 2 & 1 \end{bmatrix} = [20 \quad 10 \quad 22]$$

Homework

1) Design an 2^N -to-N Encoder with Enable. (Use "generic")
2) Design a 16-to-4 Encoder with Enable. (Use "case")
3) Design a 8-to-3 Encoder with Enable. (Use "when-else")
4) Design a 4-to-2 Encoder with Enable. (Use "with-select")
5) Design a 4-to-2 Encoder with Enable. (Use logic gates)