

# Digital VLSI Architecture

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## Assignment #3 - Fall 2011

### Iteration Bound, Retiming

The word “textbook” in this assignment refers to the book “VLSI Digital Signal Processing Systems” by Keshab K. Parhi, 1998.

1. Write a Matlab code to implement the LPM algorithm to find the iteration bound.
2. Use the code in problem 1, do the following problems from the chapter 2 of the textbook:
  - a. Problem 3 in pp. 59
  - b. Problem 5 in pp. 59
  - Note that you only need to find the iteration bound based on the LPM algorithm using the Matlab code you wrote in the first problem. Thus manual calculation is not needed.
3. Write a Matlab code to implement the Floyd-Warshall algorithm. This program will be used in the following problems.
4. Do the following problem from the chapter 4 of the textbook.
  - a. Problem 4 in pp. 113
  - b. Problem 13 in pp. 116 (in your Matlab code written for this problem you can use the Matlab code you wrote for FW algorithm in Problem 3 above)