

Assignments

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Source : Nitin Chandrachoodan PlayList

1 Assignment 1 - DFT Implementation

Implementation of DFT using Cooley-Tookey.

Resources Used :

- Rich Radke DSP Playlist
- Understanding the FFT Algorithm

Methods Used:

- For Loop Based
- Vector Based
- Using `dftmtx`
- Radix-2 Decimation In Time Algo

Finished On: 18-06-2021

2 Assignment 2 - Integer Division

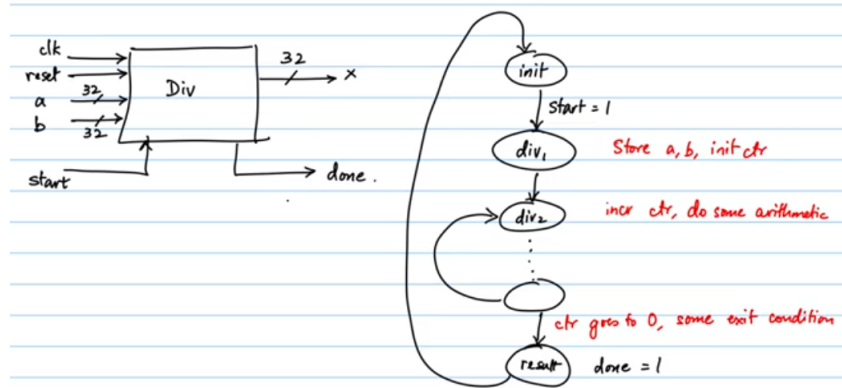
Implementation of Integer Division with the following description.

Sequential Divider	
Inputs :	a, b [31:0]
Output :	$x = a / b$ \longrightarrow Integer division.
eg :	$10 / 3 = 3$
	$100 / 3 = 33$
	$1 / 3 = 0$
	$-5 / 3 = -2$
	Restoring / Non-restoring division.

Method To Used:

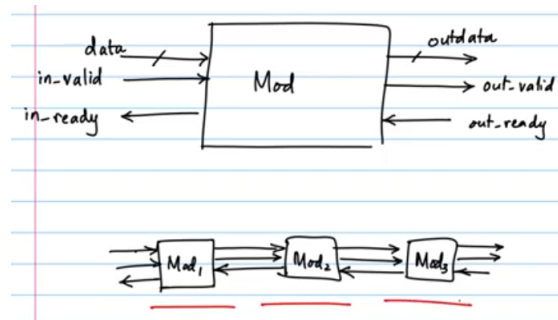
- Restoring/ Non-restoring Division

2.1 Using Start and Stop Signal



- IntegerDivision/RestoringDivisionV1/ for unsigned restoring division.
- IntegerDivision/NonRestoringDivisionV1/ for unsigned non-restoring division
- IntegerDivision/RestoringDivisionV2/ for signed restoring division.
- IntegerDivision/NonRestoringDivisionV2/ for signed non-restoring division

2.2 Using ready and valid Signal



Done : See - IntegerDivision/IntegerDivisionWithValidReady

2.3 Resources Used

- stanford
- Youtube link
- Signed Division

Finished On: 20-06-2021