CSE2306

Digital Logic

CSE1308

Practical 6: Division-by-constant combinational circuit

6.1 About this practical

The objective of this practical is to design and test a 4-bit division-by-constant as discussed in lecture notes.

6.2 4-bit division-by-3 circuit

Design and simulate a 4-bit division-by-3 combinational circuit as described in lecture notes. Simulation results should be similar to that in Figure 1.

/div3b4/ec	0				1				2			
/div3b4/ea	1	(5	(9)	13	1	(5	(9)	(13	(1)	(5)	(9)	13
/div3b4/ed	1	(2	(0)	(1)	2	χο	(1)	(2)	0	(1)	2	0
/div3b4/es	0	(1	(3)	4	5	(7	(8)	(9)	(11)	(12)	(13)	15
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Entity:div3b4 Architecture:strctrl

Figure 1: Simulation waveforms for a 4-bit division-by-3 combinational circut

6.3 The report

In your report (due after prac 6) include the results in the form of:

- Logic equations as specified in this manual,
- block/logic diagrams,
- VHDL programs (if available),
- simulation scripts (if available),
- simulation waveforms,
- **short** description of the above.

Wherever possible publish the results selecting in the **Block Diagram** window **File** \rightarrow **HTML Export**... Specify the export target directory to be ... \DigDes\Reports.