Digital Logic Design : a rigorous approach

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1. Chapter 1: Sets and Functions.

2. Chapter 2: Induction and Recursion.

3. Chapter 3: Sequences and Series.

4. Chapter 4: Directed Graphs.

5. Chapter 5: Binary Representation.

6. Chapter 6: Propositional Logic.

7. Chapter 7: Asymptotics.

8. Chapter 9: Representation of Boolean Functions by Formulas.

9. Chapter 10: The Digital Abstraction.

10. Chapter 11: Foundations of combinational circuits.

11. Chapter 12: Trees.

12. Chapter 13: Decoders and Encoders.

13. Chapter 14: Selectors.

5 Simulators and Examples

5.1 Logisim Simulator

In the following link you will find a graphical tool for designing and simulating combinational and synchronous circuits.
Some examples of implementation using Logisim (download the file and open it using Logisim):

1. The 3-bit carry function. This function appears on Chapter 1, 15, etc.

2. The AND(4) function. This function appears on Chapter 12, 13, etc.

3. The DECODER(3) function. This function appears on Chapter 13, etc.

5.2 DLX simulator

In the following link you will find a simulator of The Simplified DLX that appears on Chapters 21 and 22. This simulator can be used to write programs in the DLX's machine language, and to execute and debug these programs.
For example: Example 21.9.

6 Other ways of using our Book

7 Soon

Additional Questions. Additional Code and Circuit designs.