Digital Systems Design with VHDL and Synthesis. An Integrated Approach

Description: K.C. Chang presents an integrated approach to digital design principles, processes, and implementations to help the reader design increasingly complex systems within shorter design cycles. Chang introduces digital design concepts, VHDL coding, VHDL simulation, synthesis commands, and strategies together.

Digital Systems Design with VHDL and Synthesis focuses on the ultimate product of the design cycle: the implementation of a digital design. Many of the design techniques and considerations illustrated in the text are examples of actual real-world designs.

Unique features of the book include the following:
- VHDL code explained line by line to capture the logic behind the design concepts
- Simulation waveforms, synthesized schematics, and results are shown, verified, and analyzed
- VHDL code is synthesized and commands and strategies are discussed
- Variations on the design techniques and common mistakes are addressed
- Demonstrated standard cell, gate array, and FPGA three design processes, each with a complete design case study
- Test bench, post-layout verification, and test vector generation processes are illustrated

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