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Sommario/riassunto	This textbook provides a comprehensive overview of Advanced Digital Design Techniques, offering practical scenarios and optimization methods. It provides readers with practical scenarios for understanding of optimization strategies. This book covers topics such as advanced digital design concepts, area, speed, and power optimization, and aligning with current chip-design and SoC trends. With approximately 125 practical scenarios presented, ranging from fundamental to intricate area, speed, and power optimization techniques, this book caters to a diverse audience. It is useful to the SoC and IP design engineers, hardware professionals, undergraduate and postgraduate students, and enthusiasts aiming to implement advanced methodologies in architecture and system design for high-speed and low-power applications. Readers can explore SoC performance enhancements, FSM and FSM with datapath, DFT friendly designs, low power design, and optimization principles within the realm of Digital Design. This resource serves as a valuable guide for those looking to

enhance their knowledge of Digital Design complexities and optimization strategies.