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Titolo	Practical C++ Design : From Programming to Architecture // by Adam B. Singer
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ISBN	1-4842-3057-4
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XX, 246 p. 24 illus., 11 illus. in color.)
Disciplina	005.13
Soggetti	Programming languages (Electronic computers) Computer programming Software engineering Programming Languages, Compilers, Interpreters Programming Techniques Software Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1: Defining the Case Study -- Chapter 2: Decomposition -- Chapter 3: The Stack -- Chapter 4: The Command Dispatcher -- Chapter 5: The Command Line Interface -- Chapter 6: The Graphical User Interface -- Chapter 7: Plugins -- Chapter 8: New Requirements -- Appendix A: Acquiring, Building, and Executing pdCalc -- Appendix B: Organization of the Source Code -- References.
Sommario/riassunto	This book will help the reader take the step from competent C++ developer to designer or architect. It includes some C++ 17. Intended to be a master class in C++ design in a book, Practical C++ Design guides the reader through the design and C++ implementation of a fun and engaging case study. The journey begins with a quick exploration of the requirements for building the case study, a multi-platform Reverse Polish Notation calculator. Next, the reader delves into selecting an appropriate architecture, eventually designing and implementing all of the necessary modules to meet the calculator's requirements. By the conclusion of the book, the reader will have constructed a fully functioning calculator that builds and executes on multiple platforms. The book includes access to the author's complete

implementation, which is available for download from GitHub. Explore the Model-View-Controller pattern as we determine the optimal architecture for the calculator. Explore the observer pattern as we learn how to design an event system. Explore the singleton pattern as we design the calculator's central data repository, a reusable stack. Explore the command pattern as we design a command system supporting unlimited undo/redo. Explore the abstract factory pattern as we design a cross-platform plugin infrastructure for making the calculator extensible. Explore these topics and more as you gain practical experience learning from an expert how to use modern C++ effectively to design a complete desktop application

What you will learn:

- Learn to read a specification and translate it into a practical C++ design.
- Understand trade-offs in selecting between alternative design scenarios.
- Gain practical experience in applying design patterns to realistic development scenarios.
- Learn how to effectively use language elements of modern C++ to create a lasting design.
- Implement a complete C++ program from a blank canvas through to a fully functioning, cross platform application.
- Learn to read, modify, and extend an existing, high quality code.
- Learn the fundamentals of API design, including class, module, and plugin interfaces.
