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Titolo C++ reactive programming : design concurrent and asynchronous

applications using the RxCpp library and modern C++ 17 // Praseed

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Sommario/riassunto Learn how to implement the reactive programming paradigm with C++

and build asynchronous and concurrent applications Key Features Efficiently exploit concurrency and parallelism in your programs Use the Functional Reactive programming model to structure programs Understand reactive GUI programming to make your own applications using Qt Book Description Reactive programming is an effective way to build highly responsive applications with an easy-to-maintain code base. This book covers the essential functional reactive concepts that will help you build highly concurrent, event-driven, and asynchronous applications in a simpler and less error-prone way. C++ Reactive Programming begins with a discussion on how event processing was undertaken by different programming systems earlier. After a brisk introduction to modern C++ (C++17), you'll be taken through language-level concurrency and the lock-free programming model to set the stage for our foray into the Functional Programming model. Following this, you'll be introduced to RxCpp and its programming model. You'll be able to gain deep insights into the RxCpp library, which facilitates reactive programming. You'll learn how to deal with reactive programming using Qt/C++ (for the desktop) and C++

microservices for the Web. By the end of the book, you will be well

versed with advanced reactive programming concepts in modern C++ (C++17). What you will learn Understand language-level concurrency in C++ Explore advanced C++ programming for the FRP Uncover the RxCpp library and its programming model Mix the FP and OOP constructs in C++ 17 to write well-structured programs Master reactive microservices in C++ Create custom operators for RxCpp Learn advanced stream processing and error handling Who this book is for If you're a C++ developer interested in using reactive programming to build asynchronous and concurrent applications, you'll find this book extremely useful. This book doesn't assume any previous knowledge of reactive programming. Downloading the example code for this book You can download the example code files for all Packt books you have purchased from your account at http://www.PacktPub.com. If you purchased this book elsewhere, you can visit http://www.PacktPub.com/support and register to have the files e-mailed directly to you.