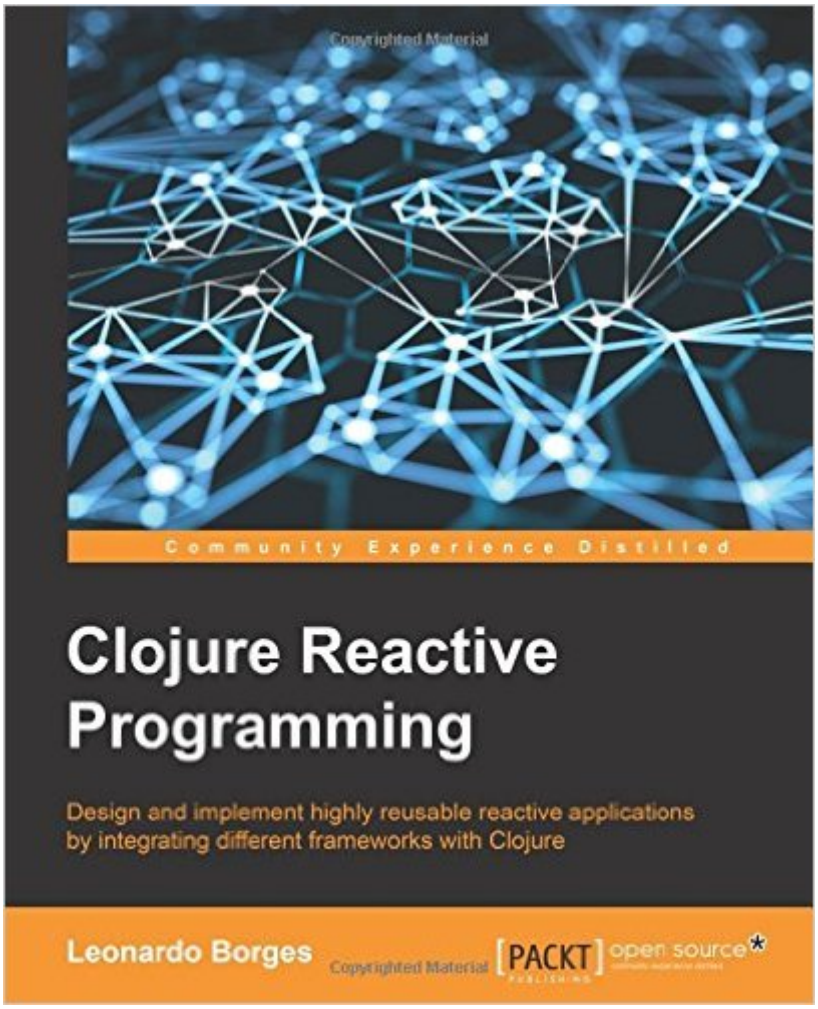
Clojure Reactive Programming - How To Develop Concurrent And Asynchronous Applications With Clojure



Synopsis

Key FeaturesLearn how to leverage the features of functional reactive programming using ClojureCreate dataflow-based systems that are the building blocks of reactive programmingLearn different Functional Reactive Programming frameworks and techniques by implementing real-world examplesBook DescriptionReactive Programming (RP) is central to many concurrent systems. It endeavors to make the process of developing highly-concurrent, event-driven, and asynchronous applications simpler and less error-prone. RP comes in many flavors and we will look at some of them in this book. Clojure Reactive Programming is a practical guide aimed at exploring RP. It starts by describing Functional Reactive Programming (FRP) and its formulations, as well as how it inspired Compositional Event Systems (CES).It also presents several examples of Reactive applications implemented in different frameworks, allowing you to develop an understanding of the subject as well as learn how to develop your ability to work with time-varying values. By the end of the book, you will be equipped to solve real-world problems and have a clear understanding of when and how you should use different the approaches that are shown in the book.What you will learnUnderstand the key abstractions of Functional Reactive Programming (FRP) and Compositional Event Systems (CES)Discover how to think in terms of time-varying values and event streamsCreate, compose, and transform Observable sequences with Reactive ExtensionsCreate a CES framework from scratch using core.async as its foundationBuild a simple ClojureScript game using ReagiIntegrate Om and RxJS in a web applicationImplement a reactive API to Web ServicesDiscover approaches to backpressure and error handlingGet to grips with futures and learn where they fit inAbout the AuthorLeonardo Borges is a programming languages enthusiast who loves writing code, contributing to open source software, and speaking on subjects he feels strongly about. After nearly 5 years of consulting at ThoughtWorks, where he worked in two commercial Clojure projects, among many others, he is now a software engineer at Atlassian. He uses Clojure and ClojureScript to help build real-time collaborative editing technology.Table of ContentsWhat is Reactive Programming? A Look at Reactive ExtensionsAsynchronous Programming and NetworkingIntroduction to core.asyncCreating your own CES Framework with core.asyncBilding a Simple ClojureScript Game with ReagiThe UI as a FunctionFuturesA Reactive API to Web Services

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Customer Reviews

I’ve read through this book once and am planning on re-reading again. I’ve been working with Clojure and ClojureScript for a little while, and was working on a web app using concepts from reactive programming when this book was released. This has been the best resource I’ve found for understanding reactive programming and should be accessible to beginners to Clojure who know nothing about reactive programming. It has lots of references if you want to dive deeper into different paradigms or libraries, and the discussion of the concepts was very interesting and worthwhile.One of the things I appreciated about this book that is somewhat rare in technical titles is the variety of different libraries, styles of reactive programming, and range of examples covered. They are all examined in pretty thorough depth and built on from each other, and I know that I will be using it as a reference for future projects to see how to apply reactive programming ideas to different domains.One of the very few technical books I’ve stayed up late reading. Highly recommended.

Reading this book was like experiencing a Vulcan mind-meld focused on RX.Previously I knew only that reactive programming was some kind of listener pattern. After reading this book I am comfortable discussing the various flavours of RX, how they can be implemented in different languages and what libraries are suitable.Thanks to the author for expanding my brain.

I bought this book when I decided to move my focus from Clojure to CLJS.I am halfway-through it and so far I found it easy to read and thanks to the examples a useful help on getting onboard with the FRP. The core.async chapters are absolutely great.

This short, focused book nicely covers both the concepts and clojure/clojurescript applications of Reactive programming (FRP). Reading it will give you a nice, efficient push up the learning curve. There’s no better praise for a technical book, in my view.

I was fortunate to have seen a small part of this title ahead of print; consequently, I had high hopes for the full published work, and was not disappointed.This title is a solid compendium of FRP in Clojure. After a brief introduction to the history, terms and patterns of FRP, you’ll find yourself reading about such topics as Rx, asynchronous networking, core.async, Om, futures and more, with numerous examples covering at times both Clojure and ClojureScript.On the topic of examples, one highlight of this book is the frequent revisiting of a particular problem or snippet, with alternative approaches, as motivating examples for how Reactive Programming and/or different libraries and patterns can be leveraged. For instance, the Futures chapter develops an example using clojure.core futures, and then illustrates some of the difficulties in their application by constrasting with an alternative library developed by the author.While a broad range of concepts are covered, the material should be accessible even to those relatively new to Clojure (if you know what "lein" is, you’re good to go!)

(HTML, ... Developers, Coding, CSS, PHP) (Volume 3) Excel VBA Programming: Learn Excel VBA Programming FAST and EASY! (Programming is Easy) (Volume 9) IEC 61131-3: Programming Industrial Automation Systems: Concepts and Programming Languages, Requirements for Programming Systems, Decision-Making Aids Python: Python Programming For Beginners - The Comprehensive Guide To Python Programming: Computer Programming, Computer Language, Computer Science Python: Python Programming Course: Learn the Crash Course to Learning the Basics of Python (Python Programming, Python Programming Course, Python Beginners Course)