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	Nota di contenuto	Cover -- Table of Contents -- Acknowledgments -- Introduction -- Who This Book Is For -- How to Read This Book -- About the Code -- About the Software -- Online Resources -- Part I-Graphs Everywhere -- 1. Engaging with Graphs -- First Contact -- Coding a Hello World Graph -- Modeling a Book Graph -- Our Plan of Action -- Wrapping Up -- 2. Getting Started -- General Project Outline -- Creating the Umbrella and Child Projects -- Packaging Graphs and Queries -- Building a Graph Store -- Defining a Graph Service API -- Wrapping Up -- Part II-Getting to Grips with Graphs -- 3. Managing Graphs Natively with Elixir -- Creating the NativeGraph Project -- Basic Workout -- Storing Graphs in the Graph Store -- Visualizing Graphs -- Wrapping Up -- 4. Exploring Graph Structures -- A Worked Example -- Modeling the Book Graph -- Generating Graphs -- Wrapping Up -- 5. Navigating Graphs with Neo4j -- Property Graph Model -- Creating the PropertyGraph Project -- Querying with Cypher and APOC -- Trying Out the Bolt Driver -- Setting Up a Graph Service -- Wrapping Up -- 6. Querying Neo4j with Cypher -- Getting Started with Cypher -- Modeling the Book Graph -- Recalling the ARPANET -- Passing Parameters to Queries -- Schemas and Types in Cypher -- Wrapping Up -- 7. Graphing Globally with RDF -- What's Different About RDF? -- RDF Model -- Creating the RDFGraph Project -- Modeling the Book

Sommario/riassunto

Data is everywhere - it's just not very well connected, which makes it super hard to relate dataset to dataset. Using graphs as the underlying glue, you can readily join data together and create navigation paths across diverse sets of data. Add Elixir, with its awesome power of concurrency, and you'll soon be mastering data networks. Learn how different graph models can be accessed and used from within Elixir and how you can build a robust semantics overlay on top of graph data structures. We'll start from the basics and examine the main graph paradigms. Get ready to embrace the world of connected data!Graphs provide an intuitive and highly flexible means for organizing and querying huge amounts of loosely coupled data items. These data networks, or graphs in math speak, are typically stored and queried using graph databases. Elixir, with its noted support for fault tolerance and concurrency, stands out as a language eminently suited to processing sparsely connected and distributed datasets.Using Elixir and graph-aware packages in the Elixir ecosystem, you'll easily be able to fit your data to graphs and networks, and gain new information insights. Build a testbed app for comparing native graph data with external graph databases. Develop a set of applications under a single umbrella app to drill down into graph structures. Build graph models in Elixir, and query graph databases of various stripes - using Cypher and Gremlin with property graphs and SPARQL with RDF graphs. Transform data from one graph modeling regime to another. Understand why property graphs are especially good at graph traversal problems, while RDF graphs shine at integrating different semantic models and can scale up to web proportions.Harness the outstanding power of concurrent processing in Elixir to work with distributed graph datasets and manage data at scale.What You Need:To follow along with the book, you should have Elixir 1.10+ installed. The book will guide you through setting up an umbrella application for a graph testbed using a variety of graph databases for which Java SDK 8+ is generally required.

Instructions for installing the graph databases are given in an appendix.