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Clojure for the Brave and True Review and Report

Clojure for the Brave and True, written by Daniel Higginbotham, takes readers through the Clojure programming language, including the basic fundamentals all the way up to more advanced topics in an effort to give them the knowledge to write full-fledged programs in Clojure and empower them to independently learn more about the language when necessary. The first couple of chapters regard setting up the Clojure toolset in order to develop programs with the language. This is followed up with six chapters about features of the Clojure language and associated code libraries that come into play in everyday use of the language, including commonly used functions and data types, idiomatic patterns, the use of code from external libraries, and the program execution process. The remaining five chapters cover more advanced topics that are used less frequently, such as using concurrency features, interacting with code written in Java rather than Clojure, creating new data types, and defining operations whose specific behavior differs for different data types. Throughout his work, Higginbotham includes a plethora of engaging examples and applications to demonstrate each new topic as it is introduced. By the end of his book, Higginbotham effectively teaches readers to use the Clojure programming language and associated libraries and tools.

Higginbotham's work is excellent by all regards. Unlike many other programming books, which are at most solely informative, it is also immensely humorous and interesting, never

becoming boring nor droning on about any particular subject. Although the examples it provides are not necessarily real-world examples, they sufficiently succinct while still demonstrating techniques in a manner that would be easy to transfer to real-world applications. In the author's own words, *Clojure for the Brave and True* "eschews *real-world* examples in favor of more interesting exercises, like *assaulting hobbits* and *tracking glittery vampires*" (Higginbotham). This makes the book "refreshing because most ... [other] programming books ... are drier than a camel's fart" (Dipert qtd. in Higginbotham). As a result of this approach, each new topic is discussed for an exactly appropriate amount of time and in an entertaining while informative manner. For instance, in the chapter regarding the functional programming paradigm, the primary example involves "build[ing] a ... [peg solitaire game] using everything [explain]ed so far ... Doing this ... help[s the reader] ... understand how to combine these concepts and techniques to solve larger problems" (Higginbotham). Although not exactly an integral component of most real-world programs, the peg solitaire game example manages to effectively demonstrate all of the topics discussed prior to it in a manner that ensures the reader truly understands them and their implications. Furthermore, the topics Higginbotham decides to cover are, for the most part, chosen well and covered to the appropriate extent. The book's early stages deeply cover core data structures, functions, and techniques which are used in every Clojure program. After introducing each of these topics, they are utilized throughout the remainder of the book in order to solidify them even further in the reader's mind. The later stages of the book cover more advanced topics to a shorter extent. While these concepts are immensely powerful, the brevity of their introductions appropriately reflects the degree to which the average Clojure program uses them. A few topics are mentioned only in passing and never expounded upon nor

mentioned again. Although covering them would have been more than welcome and made the book more comprehensive, the included content is certainly enough to start a reader off on developing solid Clojure programs and the book. In addition, without these subjects, the book is already long enough at over three hundred pages. In essence, the work is highly engaging and educational, giving readers more than enough information and mental tools to write Clojure programs. With *Clojure for the Brave and True*, Higginbotham has certifiably crafted a worthy introduction to the Clojure programming language that is guaranteed to leave readers far more knowledgeable once they have read it.

Works Cited

Higginbotham, Daniel. *Clojure for the Brave and True*. No Starch Press, 2015.