

Functional Programming Using F#

This introduction to the principles of functional programming using F# shows how to apply theoretical concepts to produce succinct and elegant programs. The book shows how mainstream computer science problems can be solved using functional programming. It introduces a model-based approach exploiting the rich type system of F#. It also demonstrates the role of functional programming in a wide spectrum of applications including databases and systems that engage in a dialogue with a user. Coverage also includes advanced features in the .NET library, the imperative features of F# and topics such as sequences, computation expressions and asynchronous computations.

With a broad spectrum of examples and exercises, the book is intended for courses in functional programming as well as for self-study. Enhancing its use as a text is a website with downloadable programs, lecture slides, mini-projects and links to further F# sources.

Michael R. Hansen is an Associate Professor in Computer Science at the Technical University of Denmark. He is the author of *Introduction to Programming Using SML* (with Hans Rischel) and *Duration Calculus: A Formal Approach to Real-Time Systems* (with Zhou Chaochen).

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