Can Also Define Operations on a Group of Data

In addition to grouping information,
◦ **we associate operations (functions)**
◦ **with such a grouping**.

For example, in MP2 and MP3, you wrote
◦ event insertion into a schedule,
◦ selecting a possible hour for an event, and
◦ event deletion from a schedule
  (for popping the stack in MP3).

What Can One Do with a Book?

Given information about a book, we can…
◦ print a citation
◦ find an author in a list of authors
◦ compare with online prices
◦ check whether we have the latest edition
◦ find other books by the same author
◦ …

Abstract Definition of a Data Structure

In the abstract, a **data structure** is

1. A **logical grouping of
   several pieces of data**, and

2. Some **operations that manipulate
   those data**.

One Can Build Data Structures with Arrays

Technically,
◦ you know enough
◦ to use data structures in **C**.

How? Use an array for each field.

`author[42]` corresponds to `title[42]`,
    `price[42]`, and so forth.

As any good Fortran programmer will tell
you, that's all you need, so get to work!

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