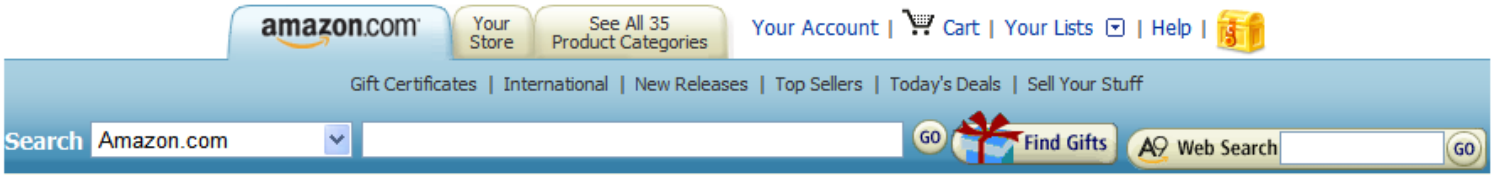
Getting Started: Basic Elements of C++

A quick tour on most of the basic elements of C++: built-in, library, and class types; variables; expressions; statements; and functions.

群杜工作室

Problem Statement



- Write a program to solve a simple problem that represents a common data-processing task from an online book store (see note).

0-201-70353-X 4 24.99
0-201-70353-X 1 28.99

- (Our Task) Write a program so we can
  - read from the file with transactions
  - computes the number of copies of each title sold
  - the total revenue (總收入) from that book
  - the average sales price.
- (Q) What language mechanisms do we need?
- (A)

for and *while* loop exercises: reading an unknown number of inputs

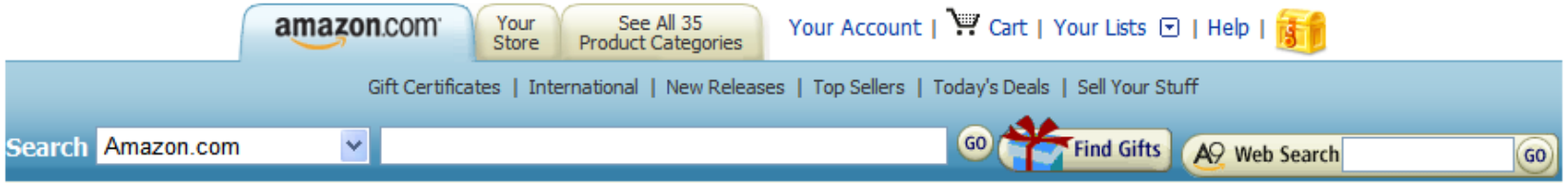
- See code (note).
- **Q:** What is the effect to use an istream as a condition?
- **A:**

Class

- One of the most important features in C++.
- (Design focus) class types should behave as naturally as the built-in types.
- We will talk about class design later. For now, we focus on “using” an existing class.
- **Q:** What do we need to know in order to use an existing class?
- **A:**

To use a class we need to know three things

- What is its name?
- Where is it defined?
- What operations does it support?
- (On line bookstore) named: Sales_item, defined in a header file Sales_item.h.



Operations on Sales_item objects

- Be able to define a variable of a class type
  - Sales_item item;
  - item is an object of type Sales_item (a Sales_item object, a Sales_item).
- Call a function isbn to fetch the ISBN from a Sales_item object.
- Use the input operator, >> to read a Sales_item object
- Use the output operator, << to write a Sales_item object
- Use the assignment operator, =, to assign one Sales_item object to another
- Use the addition operator, +, to add two Sales_item objects
- See note

Chapter Summary

- Each chapter concludes with a summary, followed by a glossary of defined terms, which together recap the chapter's most important points.
- You should use these sections as a personal checklist: If you do not understand a term, restudy the corresponding part of the chapter.