Succeeding in Business

with Microsoft®

Access® 2013

A Problem-Solving Approach

Sandra Cable

		Price
	Traders Beer	$14.0
	nd Traders Dried Plums	30	$3.50
	rthwind Traders Dried Pears	10	$30.00
31	Northwind Traders Dried Apples	10	$53.00
31	Northwind Traders Dried Plums	10	$3.50
32		15	$18.00
33		20	$46.00
34		30	$9.20
35		20	$9.20
36		10	$12.75
37		200	$9.65
38	37 Northwind Traders	17	$40.00
39	38 Northwind Trade	300	$46.00
40	39 Northwind Trader		$12.75
41	40 Northwind Traders Tea
42	41 Northwind Traders C
43	42 Northwind Traders B
44	42 Northwind Traders C
45	42 Northwind Traders C
46	

Customers_Crosstab
Customers Extended
Employees Extended
Inventory
Inventory on Hold
Inventory on Order
Inventory Purchased
Inventory Sold
Invoice Data
Order Details Extended
Order Price Totals
Order Subtotals
Order Summary
Product Category Sales by Date
Product Orders

Blank desktop database
Issue tracking
Issue tracking
Desktop issue tracking
Asset tracking

Queries
Employees Extended
Order Price Totals
orms
Active Orders Subfor
Table: Customers
Table: Orders
Table: Cust
Table: Empl
Table: En
Table:
Table:
Query
Form:
Table: O
Table: Pu
Table: Inven
Table: Invoi
Table: Order
Table: Orde

Employee List

	First Name	Last Name	E-mail Address	Business Phone
2	Andrew	Cencini	andrew@northwindtraders.con	(123)555-0100
1	Nancy	Freehafer	nancy@northwindtraders.com	(123)555-0100
6	Laura	Giussani	laura@northwindtraders.com	(123)555-0100

Succeeding in Business™ with Microsoft® Access® 2013:
A Problem-Solving Approach

*"With knowledge comes opportunity, with
opportunity comes success."*
– Anonymous

Sandra Cable
Texas A&M University – Commerce

CENGAGE
Learning®

**Succeeding in Business™ with Microsoft®
Access® 2013: A Problem-Solving Approach
Sandra Cable**

Senior Product Team Manager: Donna Gridley

Content Developer: Jon Farnham

Associate Content Developer: Angela Lang

Product Assistant: Melissa Stehler

Development Editor: Ann Fisher

Director of Production: Patty Stephan

Senior Content Project Manager: Matthew
Hutchinson

Manufacturing Planner: Fola Orekoya

Market Development Manager: Kristie Clark

Market Development Manager: Gretchen
Swann

Composition: GEX Publishing Services

Art Director: GEX Publishing Services

Text Designer: Tim Blackburn

Cover Designer: GEX Publishing Services

Cover Illustration: GEX Publishing Services

Copy Editor: GEX Publishing Services

Proofreader: Kathy Orrino

Indexer: Sharon Hilgenberg

Preface

THE SUCCEEDING IN BUSINESS™ SERIES

Because you're ready for more.

Increasingly students are coming into the classroom with stronger computer skills. As a result, they are ready to move beyond "point and click" skills and learn to use these tools in a way that will assist them in the business world.

You've told us you and your students want more: more of a business focus, more realistic case problems, more emphasis on application of software skills, and more problem-solving. For this reason, we created the **Succeeding in Business Series.**

The **Succeeding in Business Series** is the first of its kind designed to prepare the technology-savvy student for life after college. In the business world, your students' ability to use available tools to analyze data and solve problems is one of the most important factors in determining their success. The books in this series engage students who have mastered basic computer and applications skills by challenging them to think critically and find effective solutions to realistic business problems.

We're excited about the new classroom opportunities this new approach affords, and we hope you are too. We look forward to hearing about your successes!

The Succeeding in Business Team

The Succeeding in Business Series Instructor Resources

A unique approach requires unique instructor support; and we have you covered. We take the next step in providing you with outstanding Instructor Resources—developed by educators and experts and tested through our rigorous Quality Assurance process. Whether you use one resource or all the resources provided, our goal is to make the teaching and learning experience in your classroom the best it can be. With Cengage Learning's resources, you'll spend less time preparing, and more time teaching.

To access any of the items mentioned below, go to www.cengage.com/login.

Instructor's Manual

The instructor's manual offers guidance through each level of each chapter. You will find lecture notes that provide an overview of the chapter content along with background information and teaching tips. Also included are classroom activities and discussion questions that will get your students thinking about the business scenarios and decisions presented in the book.

Test Bank

ExamView features a user-friendly testing environment that allows you to not only publish traditional paper and LAN-based tests, but also Web-deliverable exams. In addition to the traditional multiple-choice, true/false, completion, short answer, and essay questions, the **Succeeding in Business** series emphasizes new critical thinking questions. Like the textbook, these questions challenge your students by going beyond defining key terms and focusing more on the real-world decision-making process they will face in business, while keeping the convenience of automatic grading for you.

Student Data Files and Solution Files

All student data files necessary to complete the hands-on portion of each level and the end-of chapter material are provided along with the solutions files.

Annotated Solution Files and Rubrics

Challenging your students shouldn't make it more difficult to set grading criteria. Each student assignment in your textbook will have a correlating Annotated Solution File that highlights what to look for in your students' submissions. Grading Rubrics list these criteria in an auto-calculating table that can be customized to fit the needs of your class. The electronic file format of both of these tools offers the flexibility of online or paper-based grading. This complete grading solution will save you time and effort on grading.

PowerPoint Presentations

The PowerPoint presentations deliver visually impressive lectures filled with the business and application concepts and skills introduced in the text. Use these to engage your students in discussion regarding the content covered in each chapter. You can also distribute or post these files for your students to use as an additional study aid.
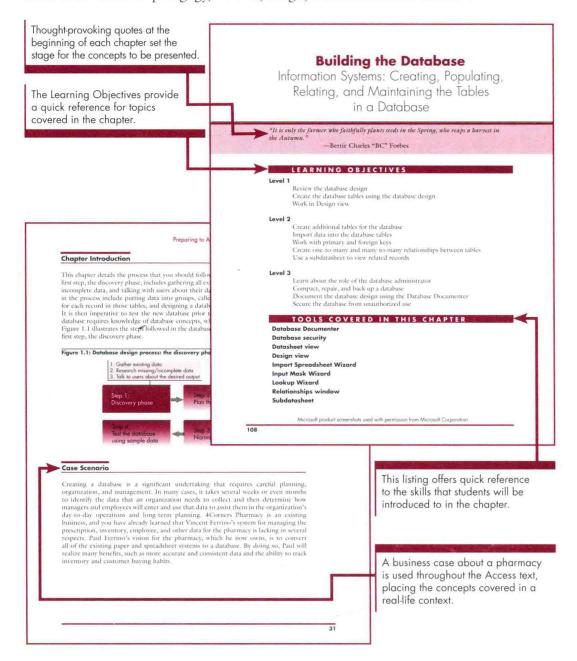
Figure Files

Every figure in the text is provided in an easy to use file format. Use these to customize your PowerPoint Presentations, create overheads, and to enhance your course.

Sample Syllabus

A sample syllabus is provided to help you get your course started. Provided in a Word document, you can use the syllabus as is or modify it for your own course.

Succeeding in Business Series Walk-Through

The Succeeding in Business approach is unique. It moves beyond point-and-click exercises to give your students more real-world problem-solving skills that they can apply in business. In the following pages, step through *Succeeding in Business with Microsoft Access 2013* to learn more about the series pedagogy, features, design, and reinforcement exercises.

Thought-provoking quotes at the beginning of each chapter set the stage for the concepts to be presented.

The Learning Objectives provide a quick reference for topics covered in the chapter.

Building the Database
Information Systems: Creating, Populating, Relating, and Maintaining the Tables in a Database

"It is only the farmer who faithfully plants seeds in the Spring, who reaps a harvest in the Autumn."

—Bertie Charles "BC" Forbes

LEARNING OBJECTIVES

Level 1
Review the database design
Create the database tables using the database design
Work in Design view

Level 2
Create additional tables for the database
Import data into the database tables
Work with primary and foreign keys
Create one-to-many and many-to-many relationships between tables
Use a subdatasheet to view related records

Level 3
Learn about the role of the database administrator
Compact, repair, and back up a database
Document the database design using the Database Documenter
Secure the database from unauthorized use

TOOLS COVERED IN THIS CHAPTER

Database Documenter
Database security
Datasheet view
Design view
Import Spreadsheet Wizard
Input Mask Wizard
Lookup Wizard
Relationships window
Subdatasheet

Microsoft product screenshots used with permission from Microsoft Corporation

108

Preparing to A...

Chapter Introduction

This chapter details the process that you should follow... first step, the discovery phase, includes gathering all ex... incomplete data, and talking with users about their d... in the process include putting data into groups, calle... for each record in those tables; and designing a datab... It is then imperative to test the new database prior t... database requires knowledge of database concepts, w... Figure 1.1 illustrates the steps followed in the database... first step, the discovery phase.

Figure 1.1: Database design process: the discovery pha...

1. Gather existing data
2. Research missing/incomplete data
3. Talk to users about the desired output

Step 1:
Discovery phase

Step 2...
Plan th...

Step 4:
Test the database
using sample data

Step 3...
Norma...

Case Scenario

Creating a database is a significant undertaking that requires careful planning, organization, and management. In many cases, it takes several weeks or even months to identify the data that an organization needs to collect and then determine how managers and employees will enter and use that data to assist them in the organization's day-to-day operations and long-term planning. 4Corners Pharmacy is an existing business, and you have already learned that Vincent Ferrino's system for managing the prescription, inventory, employee, and other data for the pharmacy is lacking in several respects. Paul Ferrino's vision for the pharmacy, which he now owns, is to convert all of the existing paper and spreadsheet systems to a database. By doing so, Paul will realize many benefits, such as more accurate and consistent data and the ability to track inventory and customer buying habits.

This listing offers quick reference to the skills that students will be introduced to in the chapter.

A business case about a pharmacy is used throughout the Access text, placing the concepts covered in a real-life context.

31

LEVEL 1
Examining Existing and Missing Sources of Data

Discovering and Evaluating Sources of Existing Data

One of the first tasks of creating a database is to identify the information that the organization needs to manage and organize. This task might take several days to several weeks and might involve interviewing department heads and other key employees to understand the data they collect and the way they use it. You might find that some departments manage their data in paper files or in computerized records. In larger organizations, data might be stored in different computerized systems. Regardless of the current data storage method, it is important to take the time to understand not only what data is collected, but also how that data is used.

As you collect information from the organization's key players, you might begin to see patterns that indicate how to organize the data. For example, you might see that the organization manages data about customers, employees, and products. Different departments might use this data in different ways and employees might need different levels of access to this data, depending on the departments in which they work and their positions in the company. For example, a manager of an Order Department needs information about products and customers, but not about employees; a human resources manager needs information about employees, but not about products; a customer service representative needs information about products and orders, but not about employees; and so on. In addition to needing different kinds of data, some employees might need more detailed information than others. An assistant in the Human Resources Department might need a list of employees working in the organization, but only the human resources manager should be able to view their salaries.

You can use a database management system, or DBMS, to manage data. There are several DBMSs, including Oracle, MySQL, and Microsoft Access. Each of these DBMS programs has specific advantages that benefit different organizations, depending on the type and amount of data they store. For example, very large organizations will benefit from the power of Oracle to manage large amounts of data on a network or on a Web site. Other businesses might choose MySQL, an open source program. An open source program permits licensed users to use, change, improve, and redistribute the software in modified or unmodified formats. This type of software is called "free" software, in which the term free typically refers to freedom that the license gives users. Free software might or might not be available at no charge. MySQL, however, requires programming expertise in Structured Query Language (SQL), the language used by most DBMSs. Oracle and MySQL are conceptually equivalent. Both are server based, both scale to large amounts of data, and both require knowledge of SQL. You will learn about SQL in Chapter 3.

Chapters contain three levels of complexity. The levels first introduce an application concept, then lead students though a problem-solving exercise using the software. With each level, the complexity of the material increases, while the exercises become less structured.

Large, clear figures provide a visual aid to the concepts presented, making it easy for students to follow along.

Figure 1.2: Customer information form used by 4Corners Pharmacy

CUSTOMER INFORMATION	
Thank you for choosing 4Corners Pharmacy. Please fill out this form so that we can assist you promptly.	
Name:	Birth Date:
Address:	
Social Security Number:	
Home Phone Number:	Fax Number:
Email Address:	
Gender: Male Female	Marital Status (circle one) Single Married Widowed Divorced
Employer:	Occupation:
Primary Care Physician:	Physician's Phone Number:
Emergency Contact:	Relationship to Patient:
Emergency Contact's Phone Number:	Spouse's Name:
Allergies:	
Prefer childproof caps? Y N	

HEAD OF HOUSEHOLD
(Complete this section only if someone other than the customer is financially responsible.)

Name:	Social Security Number:
Address:	
Home Phone Number:	Work Phone Number:

INSURANCE INFORMATION

Insurance Plan:	
Insurance Plan Phone Number:	Insurance ID Number:
Subscriber's Name:	Subscriber's Employer:

I authorize the release of any medical information necessary to process my claim and payment of benefits to 4Corners Pharmacy.

_____   _____
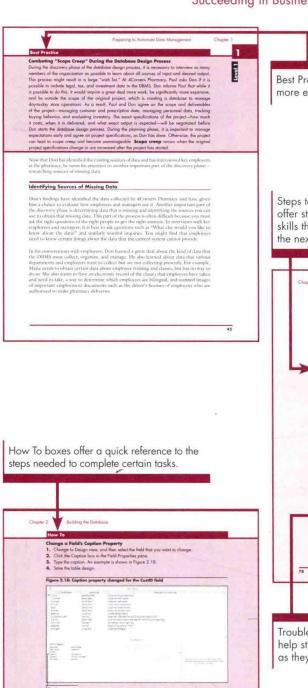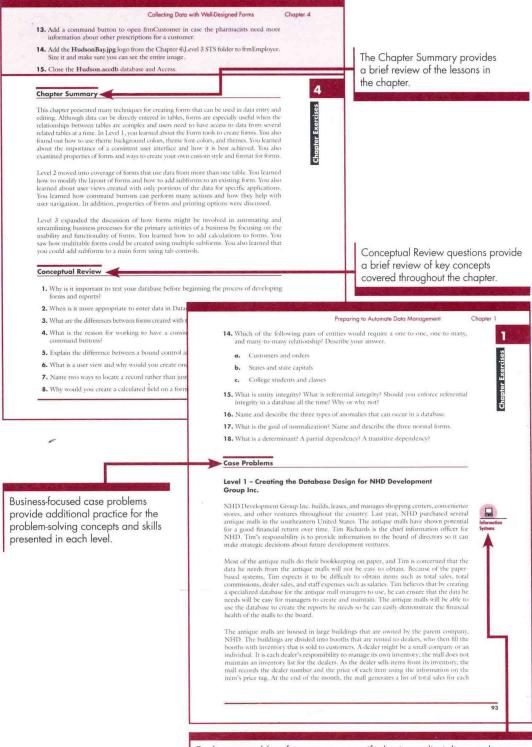**Signature of Customer/Responsible Party   Date**

Best Practice boxes offer tips to help students become more efficient users of the application.

Steps to Success activities within each level offer students the opportunity to apply the skills they have learned before moving to the next level.

How To boxes offer a quick reference to the steps needed to complete certain tasks.

Troubleshooting paragraphs offer tips and hints to help students work more efficiently and avoid errors as they work through the steps.

Sample page 1 (Chapter 1):

Preparing to Automate Data Management   Chapter 1

Best Practice

Combating "Scope Creep" During the Database Design Process

During the discovery phase of the database design process, it is necessary to interview as many members of the organization as possible to learn about all sources of input and desired output. This process might result in a large "wish list." At 4Corners Pharmacy, Paul asks Don if it is possible to include legal, tax, and investment data in the DBMS. Don informs Paul that while it is possible to do this, it would require a great deal more work, be significantly more expensive, and lie outside the scope of the original project, which is creating a database to manage day-to-day store operations. As a result, Paul and Don agree on the scope and deliverables of the project—managing customer and prescription data, managing personnel data, tracking buying behavior, and evaluating inventory. The exact specifications of the project—how much it costs, when it is delivered, and what exact output is expected—will be negotiated before Don starts the database design process. During the planning phase, it is important to manage expectations early and agree on project specifications, as Don has done. Otherwise, the project can lead to scope creep and become unmanageable. **Scope creep** occurs when the original project specifications change or are increased after the project has started.

Now that Don has identified the existing sources of data and has interviewed key employees at the pharmacy, he turns his attention to another important part of the discovery phase—researching sources of missing data.

Identifying Sources of Missing Data

Don's findings have identified the data collected by 4Corners Pharmacy and have given him a chance to evaluate how employees and managers use it. Another important part of the discovery phase is determining data that is missing and identifying the sources you can use to obtain that missing data. This part of the process is often difficult because you must ask the right questions of the right people to get the right answers. In interviews with key employees and managers, it is best to ask questions such as "What else would you like to know about the data?" and similarly worded inquiries. You might find that employees need to know certain things about the data that the current system cannot provide.

In his conversations with employees, Don learned a great deal about the kind of data that the DBMS must collect, organize, and manage. He also learned about data that various departments and employees want to collect but are not collecting presently. For example, Maria needs to obtain certain data about employee training and classes, but has no way to do so. She also wants to have an electronic record of the classes that employees have taken and need to take, a way to determine which employees are bilingual, and scanned images of important employment documents such as the driver's licenses of employees who are authorized to make pharmacy deliveries.

45

Sample page 2 (Chapter 1):

Chapter 1   Preparing to Automate Data Management

Figure 1.29: Delete cascades to related records

The record for UPN 366 is deleted from tblDrug

Cascade Delete Related Records option deletes all matching records in tblRx

Steps To Success: Level 2

You have learned a great deal about database objects, concepts, and table relationships, all requisite knowledge for planning a relational database. Now it is time to consider which database objects are required for the 4Corners Pharmacy database and how to relate the tables.

On a piece of paper, complete the following:

1. Although the 4Corners Pharmacy database might ultimately include additional tables, it will include tables for the following entities: customers, prescriptions, drugs, doctors, clinics, employees, job titles, and training classes. Given these tables, describe five queries, two forms, and three reports that managers at the pharmacy might create and describe how they would use them in the pharmacy's day-to-day operations.

2. What are some examples of using worksheets instead of a database that you have used? How would a relational database simplify the work you needed to complete?

3. What primary keys might you assign to tables that store data about the following entities: customers, prescriptions, drugs, doctors, clinics, employees, job titles, and training classes? Describe why and how you chose the primary key for each table.

4. Suppose that tblDoctor includes the fields DoctorID, DoctorFirst, and DoctorLast, and Phone; and tblClinic includes the fields ClinicID, ClinicName, Address, City, State, ZIP, and Phone. Is there a common field? Is there a foreign key? What kind of relationship might you create between these two tables?

TROUBLESHOOTING: In order to successfully complete this task, begin by reviewing the tables, and then decide which fields can be related between the tables. If necessary, create any new field within the tables so that they can be related to other tables.

78

Sample page 3 (Chapter 2):

Chapter 2   Building the Database

How To

Change a Field's Caption Property

1. Change to Design view, and then select the field that you want to change.
2. Click the Caption box in the Field Properties pane.
3. Type the caption. An example is shown in Figure 2.18.
4. Save the table design.

Figure 2.18: Caption property changed for the CustID field

Caption property

Figure 2.19 shows part of the datasheet for tblCustomer after Don changed the Caption property for several of the fields from the default field names to more meaningful descriptions.

Figure 2.19: Datasheet with new captions and resized columns

Captions

126

Collecting Data with Well-Designed Forms   Chapter 4

13. Add a command button to open frmCustomer in case the pharmacists need more information about other prescriptions for a customer.

14. Add the **HudsonBay.jpg** logo from the Chapter 4\Level 3 STS folder to frmEmployee. Size it and make sure you can see the entire image.

15. Close the **Hudson.accdb** database and Access.

4

Chapter Exercises

Chapter Summary

This chapter presented many techniques for creating forms that can be used in data entry and editing. Although data can be directly entered in tables, forms are especially useful when the relationships between tables are complex and users need to have access to data from several related tables at a time. In Level 1, you learned about the Form tools to create forms. You also found out how to use theme background colors, theme font colors, and themes. You learned about the importance of a consistent user interface and how it is best achieved. You also examined properties of forms and ways to create your own custom style and format for forms.

Level 2 moved into coverage of forms that use data from more than one table. You learned how to modify the layout of forms and how to add subforms to an existing form. You also learned about user views created with only portions of the data for specific applications. You learned how command buttons can perform many actions and how they help with user navigation. In addition, properties of forms and printing options were discussed.

Level 3 expanded the discussion of how forms might be involved in automating and streamlining business processes for the primary activities of a business by focusing on the usability and functionality of forms. You learned how to add calculations to forms. You saw how multitable forms could be created using multiple subforms. You also learned that you could add subforms to a main form using tab controls.

Conceptual Review

1. Why is it important to test your database before beginning the process of developing forms and reports?

2. When is it more appropriate to enter data in Datas...

3. What are the differences between forms created with t...

4. What is the reason for working to have a consis... command buttons?

5. Explain the difference between a bound control a...

6. What is a user view and why would you create one...

7. Name two ways to locate a record rather than just...

8. Why would you create a calculated field on a form...

> The Chapter Summary provides a brief review of the lessons in the chapter.

> Conceptual Review questions provide a brief review of key concepts covered throughout the chapter.

Preparing to Automate Data Management   Chapter 1

1

Chapter Exercises

14. Which of the following pairs of entities would require a one-to-one, one-to-many, and many-to-many relationship? Describe your answer.

    a. Customers and orders

    b. States and state capitals

    c. College students and classes

15. What is entity integrity? What is referential integrity? Should you enforce referential integrity in a database all the time? Why or why not?

16. Name and describe the three types of anomalies that can occur in a database.

17. What is the goal of normalization? Name and describe the three normal forms.

18. What is a determinant? A partial dependency? A transitive dependency?

Case Problems

Level 1 – Creating the Database Design for NHD Development Group Inc.

NHD Development Group Inc. builds, leases, and manages shopping centers, convenience stores, and other ventures throughout the country. Last year, NHD purchased several antique malls in the southeastern United States. The antique malls have shown potential for a good financial return over time. Tim Richards is the chief information officer for NHD. Tim's responsibility is to provide information to the board of directors so it can make strategic decisions about future development ventures.

Most of the antique malls do their bookkeeping on paper, and Tim is concerned that the data he needs from the antique malls will not be easy to obtain. Because of the paper-based systems, Tim expects it to be difficult to obtain items such as total sales, total commissions, dealer sales, and staff expenses such as salaries. Tim believes that by creating a specialized database for the antique mall managers to use, he can ensure that the data he needs will be easy for managers to create and maintain. The antique malls will be able to use the database to create the reports he needs so he can easily demonstrate the financial health of the malls to the board.

The antique malls are housed in large buildings that are owned by the parent company, NHD. The buildings are divided into booths that are rented to dealers, who then fill the booths with inventory that is sold to customers. A dealer might be a small company or an individual. It is each dealer's responsibility to manage its own inventory; the mall does not maintain an inventory list for the dealers. As the dealer sells items from its inventory, the mall records the dealer number and the price of each item using the information on the item's price tag. At the end of the month, the mall generates a list of total sales for each

Information Systems

93

> Business-focused case problems provide additional practice for the problem-solving concepts and skills presented in each level.

> Each case problem focuses on a specific business discipline, such as accounting, information systems, marketing, sales, and operations management. Marginal icons representing each discipline make it easy to see which disciplines are covered in each case problem.

About the Author

Sandra Cable Texas A&M University – Commerce
Sandra Cable received her doctorate in Education from Texas A&M University – Commerce in 2003. She currently teaches computer classes to businesses, colleges, and career colleges promoting simple approaches to using computer applications. In addition, she volunteers teaching computer seminars to non-profit organizations.

Author Acknowledgements

This book is the result of many people's efforts. To the thousands of students and clients that I have taught over the years, many thanks for your encouragement and for all you have taught me. I am also very grateful to my family for their support, Keith and Meridith Albright, and Miller Keplinger. Thank you for your love and support throughout the years.

I would also like to thank the great team at Cengage Learning, including: Donna Gridley, Senior Product Team Manager; Jon Farnham, Content Developer; Angela Lang, Associate Content Developer; Melissa Stehler, Product Assistant; Matthew Hutchinson, Senior Content Project Manager; and Chris Scriver, Manuscript Quality Assurance Project Leader, and his team of MQA testers: John Freitas, Danielle Shaw, Serge Palladino, and Susan Pedicini. This team at Cengage is truly a terrific team!

I would also like to give special thanks to Ann Fisher, my Development Editor. Thank you so much for keeping the project on track and for all of your great comments! It's always terrific working with a great person with wonderful ideas.

Brief
Contents

Table of **Contents**

此为试读，需要完整PDF请访问：www.ertongbook.com