

系统分析与设计

高等学校双语教学推荐教材
信息管理与信息系统系列

(英文版·第11版)
Eleventh Edition

Information Systems Analysis, Design and Implementation

斯科特·蒂利 哈里·罗森布拉特 / 著

Scott Tilley Harry Rosenblatt

张 谨 / 编译



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前言

Shelly Cashman 丛书是计算机教育领域最优质的教科书，之前版本的《系统分析与设计》受到教师和学生的好评，对此我们备感荣幸。《系统分析与设计（英文版·第 11 版）》将继续为读者带来创新、优质和可靠的内容。

Shelly Cashman 丛书的开发团队仔细审查了我们的教学方法，并分析其在当今教学中的效果。当代学生阅读量较少，但需要学习更多技能。在培养并使用技能时，学生必须了解如何将技能应用于不同情况，他们需要不断参与和挑战来巩固正在学习的内容。在本书中，我们将继续专注于学生及其最佳学习方式。

面对充满挑战的全球市场，企业需要强大的 IT 资源才能生存并有效竞争。今天的学生将成为明天的系统分析师、经理和 IT 专业人员，本教材将帮助他们为这些角色做准备。

概述

《系统分析与设计（英文版·第 11 版）》为信息系统开发提供了实用、精简和前沿的方法。本书重点关注系统分析师在动态商业环境中的作用。在整本书中，我们使用现实世界的真实示例，强调动态商业环境中的批判性思维和 IT 技能。

许多两年制和四年制高等学校在信息系统、计算机科学以及电子商务课程中使用本教材。第 11 版包括对敏捷方法、云计算和移动应用程序开发等新兴技术的扩展，这些新内容更新了系统分析与设计的传统方法。

使用本书，学生将学习如何将业务需求转化为支持企业短期和长期目标的信息系统。案例研究和任务将培养学生分析推理、批判性思考以及解决问题的能力。许多项目、任务和章节练习都可在线访问，并有详细的教学支持材料。

教材目标

《系统分析与设计（英文版·第 11 版）》为 3 学分的系统分析与设计入门课程而设计。本书旨在：

- 使用吸引学生学习的表格、大量屏幕截图和插图以及采用易于阅读的风格解释系统分析与设计。
- 设置关于项目管理工具和技术的新章节，介绍系统开发过程早期的项目管理概念。
- 在每章中设置小型伦理问题，要求学生思考 IT 环境中的真实伦理问题。
- 提供多种方法，包括对结构化系统开发方法、面向对象系统开发方法和敏捷系统开发方法的比较。
- 解释 IT 如何在当今竞争激烈的环境中支持业务需求，并描述主要的 IT 发展趋势。

此版本的新特色

《系统分析与设计（英文版·第 11 版）》提供了以下令人兴奋的新特征和扩展内容：

此为试读，需要完整PDF请访问：www.ertongbook.com

- 简化了整本书中的材料演示，帮助学生快速轻松地关注主要内容。视觉分散程度较少，主题更为清晰流畅。大量附加材料已转移到在线环境中。

- 扩大了对敏捷方法、云计算和移动应用程序开发等新兴技术的覆盖，主题更符合当今商业环境和学生兴趣，并将新发展放置在历史背景下。

- 更新了基于网络和/或开源提供的工具示例，这些工具通常免费，是现代系统分析解决方案的代表。

- 修改了反映系统分析工具和资源变化的工具包。

- 在每章末尾添加了关键词列表，帮助学生记忆书中出现的概念。

教材结构

《系统分析与设计（英文版·第11版）》共有十章。这十章分为4个阶段：系统规划、系统分析、系统设计和系统实施。

第1阶段：系统规划

第1章——系统分析与设计简介。第1章通过描述信息技术在当今动态商业环境中的作用，介绍系统分析与设计。

第2章——管理系统项目。第2章介绍如何使用项目管理工具和技术，以及如何规划、安排、监控并报告IT项目。

第2阶段：系统分析

第3章——需求建模。第3章描述需求建模过程，搜集关于系统项目的事实，准备文档并创建用于设计和开发系统的模型。

第4章——数据和过程建模。第4章讨论分析师用于显示系统如何将数据转换为有用信息的数据和过程建模技术。

第5章——对象建模。第5章讨论分析人员用于创建逻辑模型的对象建模技术。

第6章——开发策略。第6章考虑新系统的不同开发策略，以及向系统设计阶段过渡的计划。

第3阶段：系统设计

第7章——用户界面设计。第7章介绍如何设计有效的用户界面，以及如何处理数据安全和控制问题。

第8章——数据设计。第8章着重描述系统分析师构建信息系统物理模型所需的数据设计技能。

第9章——系统架构。第9章描述系统架构，将信息系统的逻辑设计转化为物理蓝图。

第4阶段：系统实施

第10章——管理系统实施。第10章介绍应用开发、记录、测试、培训、数据转换和系统切换。

对于学生

Shelly Cashman 丛书希望让全部学生都有一个有价值的学习经验，为学生提供成功所需的知识和技能。考虑这一目标，整本书大大简化了材料介绍。现在书中分散注意力的内容较少，主题流畅，这能够帮助学生轻松快速地关注主要内容。

章节学习工具及其如何帮助您

Dilbert 漫画：有一种说法是，一张图片胜过千言万语。为了说明这一概念，教材中每个开发阶段都以引人注目的 Dilbert 漫画开始。即使您不熟悉斯科特·亚当斯（Scott Adams）的角色，您也将很快

在工作场所中看到他的行为。

案例：每章包括所关注重点问题的四个简要案例。

伦理问题：每章结尾提出了一个现实的伦理问题，这些示例要求你审视你的举动，以及思考如何应对常见的工作环境。

本章练习：回答 10 个问题将表明您了解章节的要点，5 个讨论话题和 5 个项目提供了深入挖掘和学习的机会。

在线学习：在 CengageBrain.com 上可购买或租用圣智 (Cengage Learning) 教科书、电子书、电子章节和学习工具，并享有较大的折扣。此外，CengageBrain.com 可直接访问 MindTap，其将为您提供获取更高成绩所需的工具。

对于教师

Shelly Cashman 丛书致力于为您提供使课堂成功的所有工具。所有补充材料的信息可通过圣智公司的代表或致电以下电话号码得到：学院、大学、继续教育部门、职业技术学校、职业学院、企业、行业、政府、顾客、零售商、批发商、图书馆和经销商，请致电 800-354-9706；基础教育学校、中等职业学校、成人教育学校和学区，请致电 800-354-9706。在加拿大，请致电 800-268-2222。

教学配套网站

本教材的教学配套网站包括教学和测试工具，所有这些都可从 ss0.cengage.com 下载。教师资源包括：

- **教师手册：**以 Microsoft Word 形式提供，包括总结各章内容、图片和章节基本要素、教师提示、课堂活动、实验室活动以及快速测验的讲义。

- **课程大纲：**帮助轻松制定涵盖教学大纲、作业、考试和其他课程信息的课程大纲样本。还包括一个 Microsoft Project 文件，用于创建五个阶段的甘特图。教师可使用该项目文件创建一个视觉教学大纲，其包括额外的任务、测验和项目。该文件还可用于跟踪课程进度，欢迎教师将此文件发放给学生，并向他们展示如何管理团队项目的任务、资源和期限。

- **演示文稿：**多媒体讲座演示系统根据章节目标为每一章提供幻灯片。

- **图片文件：**电子格式的教材中有每个图片的源文件。

- **习题答案：**包括章节最后练习部分的答案。

- **试题库和学习测试系统：**试题库包含每章的章节练习，并在适当的时候提供基于学习目标和批判性思维的问题、页码引用和图形引用。圣智学习测试系统是一个灵活的在线系统，可让你：

- ✓ 使用多样化圣智解决方案来创建、编辑并管理试题库；

- ✓ 立即创建多个测试版本；

- ✓ 在学习管理系统 (LMS)、教室或任何地方提供测试。

- **学生附加活动：**包括学生可用于完成案例研究的表格。还为每一章额外提供两个案例研究，可作为家庭作业、额外评分或评估工具。章节巩固练习包括判断题、多选题和简答题，帮助学生在材料时获得信心。

- **其他教师文件：**包括案例研究任务的几个示例解决方案。要安装此程序，请遵循使你能够使用该软件并获得支持的简单注册过程，详细的说明在教学配套网站上提供。还包括为 SCR 网站上的学生发布的电子邮件和语音邮件的 Word 版本，以及新世纪 (New Century) 案例研究的访谈摘要。

思维导图

思维导图 (MindTap) 是个性化教学经验, 包含能够引导学生分析、应用并提高思维的相关任务。它让你轻松测试学生技能和成果。

- 个性化教学: 通过 “Learning Path” 以学生的关键目标构建学习路线。控制学生看到的内容及其看到内容的时间。按原样使用, 或使其与您的教学大纲匹配——您可以隐藏、重新排列、添加或创建自己的内容。

- 指导学生: 结合相关阅读、多媒体和活动的独特学习路径, 使学生的学习内容从基础知识和理解逐步提升到分析和应用。

- 促进更好的成果: 向教师赋权, 并通过提供课程进度、课程时间、参与度和完成率的分析和报告激励学生。

本书中的思维导图包括学习工具、批判性思维、交互式测试, 所有这些均集成到了电子阅读器, 电子阅读器中包含了所有打印文本的完整内容。

作者注

系统分析与设计是创建高质量企业信息系统的严格过程。信息系统是为业务功能提供支持的人员、数据和技术的合并, 随着技术的发展, 系统分析也是如此。

系统分析师是一名有价值的团队成员, 负责计划、开发并维护信息系统。分析师必须是具有强大分析和批判性思维能力的优秀沟通者, 他们也必须精通商业并有过人的技术能力, 且能够与管理者和程序员密切合作。

在《系统分析与设计 (英文版·第 11 版)》中, 我一直努力涵盖现代系统分析与设计的基本方面, 包括技术和非技术问题。本教材第 11 版的最重大变化是简化了主题, 帮助学生快速轻松地关注主要内容, 主题的分散性更小, 流畅性更高。但本书仍涵盖了大量内容, 因此, 对于教师和学生, 需要明智地选择在一个学期内要讨论的话题。

从个人角度, 我必须对哈里·罗森布拉特 (Harry Rosenblatt) 在几年前将我纳入这个项目表示真诚的感谢, 我们在咖啡馆进行的谈话促成了共同撰写第 11 版的计划, 但那时我并不知道哈里会在撰写第 11 版的工作开始前就不幸地离开了我们。当我撰写这本书的时候, 我无法询求哈里的经验和智慧, 但他的希望和构想却一直指导着我。此版本教材中的任何错误或遗漏都纯属我的责任。

出版者注

随着《系统分析与设计 (英文版·第 11 版)》的出版, 我们很高兴地欢迎斯科特·蒂利 (Scott Tilley) 加入 Shelly Cashman 丛书作者团队。斯科特是佛罗里达理工学院 (FIT) 的教授, 曾担任计算机系教学主任。他在维多利亚大学获取博士学位, 也是国际计算机学会杰出授课人。他为《今日佛罗里达报》(Florida Today) 撰写每周的“当今技术” (Technology Today) 专栏。除了本教材, 他还编写了《云环境下的软件测试: 迁移与执行》(Software Testing in the Cloud: Migration & Execution, Springer, 2012)、《软件测试中的难题: 将使用测试解决问题视为一种服务》(Hard Problems in Software Testing: Solutions Using Testing as a Service, Morgan & Claypool, 2014); 《使用 Hadoop 单元测试 iOS 应用程序: 快速分布式 GUI 软件测试》(Testing iOS Apps with Hadoop Unit: Rapid Distributed GUI Testing, Morgan & Claypool, 2014)。斯科特最近在 FIT 商学院教授系统分析与设计课程并使用《系统分析与设计 (英文版·第 10 版)》作为其教材, 他将课堂上学生的反馈纳入此版本的教材中。

致谢

如果没有很多人的帮助和支持，我无法完成像《系统分析与设计》这样的书。首先，我要感谢哈里·罗森布拉特为本教材第 11 版建立的坚实基础。

我要向本教材的策划编辑德布·考夫曼 (Deb Kaufmann) 致以由衷的感谢，他的见解和建议十分有价值。我还要感谢提供反馈意见的审稿人：福赛斯社区技术学院的梅丽莎·布赖恩特 (Melisa Bryant)；常春藤社区技术学院的保罗·达道斯 (Paul Dadosky)；达科他州立大学的巴伯·迈尔斯 (Barbara Myers)；吉尔福特社区技术学院的特雷莎·肖特 (Teresa Shorter)。

非常感谢整个制作团队的支持。感谢 Cengage Learning 公司的凯特·梅森 (Kate Mason)、阿莉莎·普拉特 (Alyssa Pratt) 和斯泰西·拉莫迪 (Stacey Lamodi) 以及 Lumina Datamatics 公司的阿鲁·约瑟夫·拉吉 (Arul Joseph Raj)。

最后，真诚感谢提供反馈意见的教师和学生，我已经尽力解决你们的问题并采纳你们的建议。我会继续仔细听取你们的意见，欢迎随时通过电子邮件 scott@srtilley.com 与我联系。

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FOREWORD

Harry Rosenblatt was a teacher, a mentor, and textbook author. His dedication to writing the previous editions of this book was grounded in the desire to help students understand the material, and to provide the foundation for becoming future systems analysts and designers. He sought input from students on how to make the textbook better, even going as far as putting together a team of students to help him. Harry's work has enabled thousands of students to gain an understanding of systems analysis and design.

While Harry was writing the previous editions of this text, he was actively teaching at several colleges. Harry's experience with teaching this material led him to develop an extensive selection of supplemental resources to assist instructors who used the text in their courses. The format of each edition was an iterative revision of his pedagogical views of the subject matter stemming from his teaching experience.

Farewell, Harry. Your legacy will live on through the continued publication of this text. Systems analysis and design is a timeless topic in the field of information technology, and thousands of students will continue to be touched by your work.

Ronald R. Savilla, MBA
Carolinas Healthcare System
Former student and textbook assistant

PREFACE

The Shelly Cashman Series® offers the finest textbooks in computing education. We are proud that our previous editions of *Systems Analysis and Design* have been so well received by instructors and students. *Systems Analysis and Design, Eleventh Edition* continues with the innovation, quality, and reliability you have come to expect.

The Shelly Cashman Series development team carefully reviewed our pedagogy and analyzed its effectiveness in teaching today's student. Contemporary students read less, but need to retain more. As they develop and perform skills, students must know how to apply the skills to different settings. Today's students need to be continually engaged and challenged to retain what they're learning. With this book, we continue our commitment to focusing on the user and how they learn best.

Facing a challenging global marketplace, companies need strong IT resources to survive and compete effectively. Many of today's students will become the systems analysts, managers, and IT professionals of tomorrow. This textbook will help prepare them for those roles.

Overview

Systems Analysis and Design, Eleventh Edition offers a practical, streamlined, and updated approach to information systems development. The book emphasizes the role of the systems analyst in a dynamic, business-related environment. Throughout the book, real-world examples emphasize critical thinking and IT skills in a dynamic, business-related environment.

Many two- and four-year colleges and schools use this book in information systems, computer science, and ecommerce curriculums. The *Eleventh Edition* includes expanded coverage of emerging technologies, such as agile methods, cloud computing, and mobile applications. This new material compliments the updated treatment of traditional approaches to systems analysis and design.

Using this book, students learn how to translate business requirements into information systems that support a company's short- and long-term objectives. Case studies and assignments teach analytical reasoning, critical thinking, and problem-solving skills. Numerous projects, assignments, and end-of-chapter exercises are accessible online, along with detailed instructor support material.

Objectives of This Textbook

Systems Analysis and Design, Eleventh Edition is intended for a three credit-hour introductory systems analysis and design course. This textbook is designed to:

- Explain systems analysis and design using an appealing format, numerous screen shots and illustrations, and an easy-to-read style that invites students to learn.
- Introduce project management concepts early in the systems development process, with a new chapter that explains project management tools and techniques.
- Challenge students with a Question of Ethics mini-case in each chapter that asks them to respond to real-life ethical issues in an IT environment.
- Provide multi-method coverage, including a comparison of structured, object-oriented, and agile systems development methods.
- Explain how IT supports business requirements in today's intensely competitive environment, and describe major IT developments and trends.

New and Updated Features in This Edition

Systems Analysis and Design, Eleventh Edition offers these exciting new and expanded features:

- Streamlined presentation of material throughout the book, helping students focus on the main content quickly and easily. There is less visual distraction and a clearer flow of topics. Much of the additional material has been moved online.
- Expanded coverage of emerging technologies, such as agile methods, cloud computing, and mobile applications, making topics more aligned with today's business environments and student interests. New developments are placed in historical context.
- Updated examples of CASE tools reflecting web-based and/or open source offerings. These tools are often free and are representative of modern systems analysis solutions.
- Revised Toolkits reflecting changes in systems analysis tools and resources.
- Glossary of key terms now appears at the end of each chapter, helping students remember concepts in context.

Organization of This Textbook

Systems Analysis and Design, Eleventh Edition has ten chapters. The ten chapters are organized into four phases: planning, analysis, design, and implementation.

Phase 1: Systems Planning

- **Chapter 1 – Introduction to Systems Analysis and Design:** Chapter 1 provides an introduction to systems analysis and design by describing the role of information technology in today's dynamic business environment.
- **Chapter 2 – Managing Systems Projects:** Chapter 2 describes how to use project management tools and techniques, and how to plan, schedule, monitor, and report on IT projects.

Phase 2: Systems Analysis

- **Chapter 3 – Requirements Modeling:** Chapter 3 describes the requirements modeling process: gathering facts about a systems project, preparing documentation, and creating models that will be used to design and develop the system.
- **Chapter 4 – Data and Process Modeling:** Chapter 4 discusses data and process modeling techniques that analysts use to show how the system transforms data into useful information.
- **Chapter 5 – Object Modeling:** Chapter 5 discusses object modeling techniques that analysts use to create a logical model.
- **Chapter 6 – Development Strategies:** Chapter 6 considers various development strategies for the new system, and plans for the transition to the systems design phase.

Phase 3: Systems Design

- **Chapter 7 – User Interface Design:** Chapter 7 explains how to design an effective user interface, and how to handle data security and control issues.
- **Chapter 8 – Data Design:** Chapter 8 focuses on the data design skills that are necessary for a systems analyst to construct the physical model of the information system.

- **Chapter 9 – System Architecture:** Chapter 9 describes system architecture, which translates the logical design of an information system into a physical blueprint.

Phase 4: Systems Implementation

- **Chapter 10 – Managing Systems Implementation:** Chapter 10 describes application development, documentation, testing, training, data conversion, and system change-over.

FOR THE STUDENT

The Shelly Cashman Series wants all students to have a valuable learning experience that will provide the knowledge and skills you need to be successful. With that goal in mind, the presentation of material has been significantly streamlined throughout the book. There is now less distraction on the page and a clearer flow of topics. This should help students focus on the main content quickly and easily.

CHAPTER LEARNING TOOLS AND HOW THEY WILL HELP YOU

Dilbert: There is a saying that a picture is worth a thousand words. To illustrate this concept, each phase of the textbook begins with an eye-catching Dilbert® cartoon. If you're not familiar with Scott Adams' characters, you will quickly recognize their behavior in the workplace.

Case In Point: Each chapter includes four brief cases that focus on key issues.

A Question of Ethics: A realistic ethical issue is presented at the end of each chapter. These examples force you to examine your reactions and how you would respond to common workplace situations.

Chapter Exercises: Your answers to the ten Questions will show that you understand the key points. Five Discussion Topics and five Projects offer opportunities to dig deeper and learn even more.

Learn Online: CengageBrain.com is the premier destination for purchasing or renting Cengage Learning textbooks, eBooks, eChapters, and study tools at a significant discount. In addition, CengageBrain.com provides direct access to MindTap, which gives you the tools you need to get better grades, all in one place, all there when you need them.

FOR THE INSTRUCTOR

The Shelly Cashman Series is dedicated to providing you all of the tools you need to make your class a success. Information on all supplementary materials is available through your Cengage Learning representative or by calling one of the following telephone numbers: Colleges, Universities, Continuing Education Departments, Post-Secondary Vocational Schools, Career Colleges, Business, Industry, Government, Trade, Retailer, Wholesaler, Library, and Resellers, call Cengage Learning at 800-354-9706; K-12 Schools, Secondary and Vocational Schools, Adult Education, and School Districts, call Cengage Learning at 800-354-9706. In Canada, call Nelson Cengage Learning at 800-268-2222.

INSTRUCTOR COMPANION SITE

The Instructor Companion Site for this textbook includes both teaching and testing aids, and all are available for download at sso.cengage.com. The Instructor Resources include:

- **Instructor's Manual:** Includes lecture notes summarizing the chapter sections, figures and boxed elements found in every chapter, teacher tips, classroom activities, lab activities, and quick quizzes in Microsoft Word files.
- **Syllabus:** Easily customizable sample syllabus that covers policies, assignments, exams, and other course information. Also included is a Microsoft Project file used to create the five Phase Opener Gantt charts. An instructor can use this project file to create a visual syllabus that could include additional tasks, quizzes, and projects. The file also can be used to track class progress through the course. Instructors are welcome to distribute this file to students, and show them how to manage tasks, resources, and deadlines for team projects that might be assigned.
- **PowerPoint Presentations:** A multimedia lecture presentation system provides slides for each chapter, based on chapter objectives.
- **Figure Files:** Illustrations for every figure in the textbook in electronic form.
- **Solutions to Exercises:** Includes solutions for end-of-chapter exercises.
- **Test Bank & Test Engine:** Test Banks include questions for every chapter, and featuring objective-based and critical thinking question types, page number references, and figure references when appropriate. Cengage Learning Testing powered by Cognero is a flexible, online system that allows you to:
 - **Author, edit, and manage test bank content from multiple Cengage Learning solutions.**
 - **Create multiple test versions in an instant.**
 - **Deliver tests from your LMS, your classroom, or wherever you want!**
- **Additional Activities for Students:** The forms that students can use to complete the Case Studies are included. Two additional case studies are also provided for every chapter, to be assigned as homework, extra credit, or assessment tools. Chapter Reinforcement Exercises, which are true/false, multiple-choice, and short answer questions that help students gain confidence in the material learned are included.
- **Additional Faculty Files:** Several sample solutions to case study tasks also are included. To install this program, you follow a simple registration process that entitles you to use the software and obtain support. Detailed instructions are provided on the Instructor Companion Site. Also included are Word document versions of the email and voice mail messages posted for students on the SCR website and the Interview Summaries for the New Century Case Study.

MINDTAP

MindTap is a personalized teaching experience with relevant assignments that guide students to analyze, apply, and improve thinking, allowing you to measure skills and outcomes with ease.

- **Personalized Teaching:** Becomes yours with a Learning Path that is built with key

student objectives. Control what students see and when they see it. Use it as-is or match to your syllabus exactly—hide, rearrange, add, and create your own content.

- **Guide Students:** A unique learning path of relevant readings, multimedia and activities that move students up the learning taxonomy from basic knowledge and comprehension to analysis and application.
- **Promote Better Outcomes:** Empower instructors and motivate students with analytics and reports that provide a snapshot of class progress, time in course, engagement, and completion rates.

The MindTap for *Systems Analysis and Design* includes study tools, critical thinking challenges, and interactive quizzing, all integrated into an eReader that contains the full content from the printed text.

AUTHOR'S NOTE

Systems analysis and design is a disciplined process for creating high-quality enterprise information systems. An information system is an amalgam of people, data, and technology to provide support for business functions. As technology evolves, so does systems analysis.

A systems analyst is a valued team member who helps plan, develop, and maintain information systems. Analysts must be excellent communicators with strong analytical and critical thinking skills. They must also be business-savvy and technically competent, and be equally comfortable working with managers and programmers.

With the eleventh edition of *Systems Analysis and Design*, I have striven to cover the fundamental aspects of modern systems analysis and design, including both technical and non-technical issues. By far the most significant change with the eleventh edition of this textbook has been the streamlining of subject coverage, helping students focus on the main content quickly and easily. There is less distraction and a clearer flow of topics. That said, there is still a lot of material to cover, so students and faculty should not be surprised if they have to be judicious in their selection of topics to discuss in a typical semester.

On personal note, I would be remiss if I did not express my sincere gratitude to Harry Rosenblatt for involving me in this project several years ago. Our talks at the local coffee shop led to plans for co-authorship of the eleventh edition. Little did I know that Harry would be cruelly taken from us before work on the eleventh edition could begin. While writing this book I didn't have access to Harry's experience or wisdom to advise me, but I did have his enduring vision to guide me. Any errors or omissions in this edition of the textbook are purely my responsibility.

PUBLISHER'S NOTE

With the eleventh edition we are thrilled to welcome Scott Tilley to The Shelly Cashman Series author team. Scott is a professor at the Florida Institute of Technology (FIT), where he is director of computing education. He has a Ph.D. from the University of Victoria. He is an ACM Distinguished Lecturer. He writes the weekly "Technology Today" column for the *Florida Today* newspaper (Gannett). In addition to this book, he is the author of *Software Testing in the Cloud: Migration & Execution* (Springer, 2012), *Hard Problems in Software Testing: Solutions Using Testing as a Service* (Morgan & Claypool, 2014), *Testing iOS Apps with Hadoop Unit: Rapid Distributed GUI Testing* (Morgan & Claypool, 2014). Scott recently taught the Systems Analysis and Design course in the College of Business at FIT and used *Systems Analysis and Design, Tenth Edition*. He incorporated his students' feedback from this offering of the course

to help shape his revision of the textbook.

ACKNOWLEDGMENTS

A book like *Systems Analysis and Design* would not be possible without the help and support of a great many people. First and foremost, I want to thank Harry Rosenblatt for providing the solid foundation upon which the eleventh edition of this textbook was built.

A very special “Thank You” to Deb Kaufmann, the textbook’s development editor, whose insight and suggestions were extremely valuable. Thanks also to the reviewers who provided feedback that shaped each chapter: Melisa “Joey” Bryant, Forsyth Technical Community College; Paul Dadosky, Ivy Technical Community College; Barbara Myers, Dakota State University; and Teresa Shorter, Guilford Technical Community College.

The support of the entire production team is greatly appreciated. Thanks to Kate Mason, Alyssa Pratt, and Stacey Lamodi at Cengage Learning, and Arul Joseph Raj at Lumina Datamatics.

Finally, sincere thanks to the instructors and students who offered feedback and comments. I have tried to address your concerns and incorporate your suggestions. I will certainly continue to listen carefully. Feel free to contact me via email at scott@srtilley.com.