• **Dynamic Study Modules** help students study chapter topics and the language of MIS on their own by continuously assessing their knowledge application and performance in real time. These are available as graded assignments prior to class, and are accessible on smartphones, tablets, and computers.

• **Learning Catalytics™** is a student response tool that helps you generate class discussion, customize your lecture, and promote peer-to-peer learning based on real-time analytics. Learning Catalytics uses students' smartphones, tablets, or laptops to engage them in more interactive tasks.

• **The Gradebook** offers an easy way for you and your students to see their performance in your course.

  Item Analysis lets you quickly see trends by analyzing details like the number of students who answered correctly/incorrectly, time on task, and more.

  And because it’s correlated with the AACSB Standards, you can track students’ progress toward outcomes that the organization has deemed important in preparing students to be leaders.

• **Pearson eText** enhances learning—both in and out of the classroom. Students can take notes, highlight, and bookmark important content, or engage with interactive lecture and example videos that bring learning to life anytime, anywhere via MyLab or the app.

• **Accessibility (ADA)**—Pearson is working toward WCAG 2.0 Level AA and Section 508 standards, as expressed in the Pearson Guidelines for Accessible Educational Web Media. Moreover, our products support customers in meeting their obligation to comply with the Americans with Disabilities Act (ADA) by providing access to learning technology programs for users with disabilities.

  Please email our Accessibility Team at disability.support@pearson.com for the most up-to-date information.

• **With LMS Integration**, you can link your MyLab course from Blackboard Learn™, Brightspace® by D2L®, Canvas™, or Moodle®.
By completing the projects in this text, students will be able to demonstrate business knowledge, application software proficiency, and Internet skills. These projects can be used by instructors as learning assessment tools and by students as demonstrations of business, software, and problem-solving skills to future employers. Here are some of the skills and competencies students using this text will be able to demonstrate:

**Business Application skills:** Use of both business and software skills in real-world business applications. Demonstrates both business knowledge and proficiency in spreadsheet, database, and Web page/blog creation tools.

**Internet skills:** Ability to use Internet tools to access information, conduct research, or perform online calculations and analysis.

**Analytical, writing and presentation skills:** Ability to research a specific topic, analyze a problem, think creatively, suggest a solution, and prepare a clear written or oral presentation of the solution, working either individually or with others in a group.

* Dirt Bikes Running Case in MyLabMIS

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About the Authors

Kenneth C. Laudon is a Professor of Information Systems at New York University’s Stern School of Business. He holds a B.A. in Economics from Stanford and a Ph.D. from Columbia University. He has authored twelve books dealing with electronic commerce, information systems, organizations, and society. Professor Laudon has also written over forty articles concerned with the social, organizational, and management impacts of information systems, privacy, ethics, and multimedia technology.

Professor Laudon’s current research is on the planning and management of large-scale information systems and multimedia information technology. He has received grants from the National Science Foundation to study the evolution of national information systems at the Social Security Administration, the IRS, and the FBI. Ken’s research focuses on enterprise system implementation, computer-related organizational and occupational changes in large organizations, changes in management ideology, changes in public policy, and understanding productivity change in the knowledge sector.

Ken Laudon has testified as an expert before the United States Congress. He has been a researcher and consultant to the Office of Technology Assessment (United States Congress), Department of Homeland Security, and to the Office of the President, several executive branch agencies, and Congressional Committees. Professor Laudon also acts as an in-house educator for several consulting firms and as a consultant on systems planning and strategy to several Fortune 500 firms.

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The Laudons have two daughters, Erica and Elisabeth, to whom this book is dedicated.
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UPS Competes Globally with Information Technology
Will Automation Steal Our Jobs?
New Technology at UPS Clashes with Outdated Ways of Working

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Soma Bay Prospers with ERP in the Cloud
CRM Helps Adidas Know Its Customers One Shoe Buyer at a Time
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Chapter 10: E-commerce: Digital Markets, Digital Goods
E-commerce Comes to the Dashboard: The Battle for the “Fourth Screen”
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Preface

New To This Edition

*Essentials of Management Information Systems*, 14th edition has been thoroughly updated to cover the latest industry and technology changes that impact the course.

**MyLab MIS**

The MyLab MIS platform provides an interactive digital environment that supports the unique strengths of the content. The goal of *Essentials of Management Information Systems* is to provide students and instructors with an authoritative, up-to-date, interactive, and engaging introduction to the MIS field. The MyLab MIS edition extends these features to a digital platform that emphasizes videos, animations, interactive quizzes, and student comprehension of concepts, theories, and issues. The MyLab MIS environment reflects the new learning styles of students, which are more social, interactive, and usable on digital devices such as smartphones and tablets.

**WHAT'S INCLUDED**

- **Interactive eText** enhances learning – both in and out of the classroom. Students can add notes, highlight, and bookmark important content, or engage with interactivities and Conceptual Animations to bring learning to life via MyLab or the app.
- **New Conceptual Animations** have author Ken Laudon walk students through three of the most important concepts in each chapter (36 total) using a contemporary animation platform. Available only in the MyLab MIS eText.
- **New Video Cases** collection: 28 video cases (two or more per chapter) and 10 additional instructional videos covering key concepts and experiences in the MIS world. The video cases are written by Ken Laudon and illustrate how real-world corporations and managers are using information technology and systems and are paired with a brief quiz. Video Cases are listed at the beginning of each chapter. (See page xxvii for a list of Video Cases available).
- **MIS Decision Simulations** – interactive exercises allowing students to play the role of a manager and make business decisions.
- **Chapter Warm Ups, Chapter Quizzes** – objective-based quizzing to test knowledge.
- **Discussion Questions** – threaded discussion topics taken from the end of chapter.
- **Excel & Access Graded Projects** – live in the application auto-graded Grader projects provided inside MyLab MIS to support classes covering Office tools. In addition, Hands-On MIS Projects from the book are also available.
- **Running Case** on Dirt Bikes USA provides additional hands-on projects for each chapter.
- **Dynamic Study Modules** help students study chapter topics and the language of MIS on their own by continuously assessing their knowledge application and performance in real time. These are available as graded assignments prior to class, and are accessible on smartphones, tablets, and computers.
- **Learning Catalytics** is a student response tool that helps you generate class discussion, customize your lecture, and promote peer-to-peer learning based on real-time analytics. Learning Catalytics uses students’ devices to engage them in more interactive tasks.
- **Learning Tracks**: 53 Learning Tracks in MyLab MIS for additional coverage of selected topics. This edition includes new Learning Tracks for Structured Methodologies and Object-Oriented Development. (See page xxvi for list of Learning Tracks available.)
ENHANCED STAND-ALONE PEARSON eTEXT

Essentials of Management Information Systems is also available as a stand-alone eText which extends the learning experience, anytime and anywhere: The mobile app lets students use their eText whenever they have a moment in their day, on Android and iPhone mobile phones and tablets. Offline access ensures students never miss a chance to learn. The eText engages students with compelling media: Videos and animations written and produced by the authors bring key concepts to life, helping students place what they are reading into context. Other features include highlights that allow educators to share information directly with students within their eText, and analytics that let educators gain insight into how students use their eText, and plan more effective instruction.

Both the MyLab MIS and eText platforms provide an affordable, simple-to-use mobile reading experience that lets instructors and students extend learning beyond class time.

NEW AND UPDATED TOPICS

The 14th edition features all new opening, closing, and Interactive Session cases. The text, figures, tables, and cases have been updated through September 2019 with the latest sources from industry and MIS research. New topics and coverage include:

• Updated and expanded coverage of artificial intelligence (AI): Chapter 11 has been rewritten to include new expanded coverage of machine learning, “deep learning,” natural language systems, computer vision systems, and robotics, reflecting the surging interest in business uses of AI and “intelligent” techniques.

• Making the business case for systems: Chapter 12 has been rewritten to provide expanded coverage of techniques and decision making criteria for developing a business case for the acquisition and deployment of information systems and related technologies. The chapter shows how to evaluate and select systems projects and technologies that will deliver the greatest value to the firm.

• Big Data and the Internet of Things: In-depth coverage of big data, big data analytics, and the Internet of Things (IoT) in Chapters 1, 6, 7, and 11. Includes, analyzing IoT data streams, Hadoop, in-memory computing, nonrelational databases, data lakes, and analytic platforms.

• Cloud Computing: Updated and expanded coverage of cloud computing in Chapter 5 (IT infrastructure) with more detail on types of cloud services, private and public clouds, hybrid clouds, managing cloud services, and a new Interactive Session on using cloud services. Cloud computing also covered in Chapter 6 (databases in the cloud), Chapter 8 (cloud security), Chapter 9 (cloud-based CRM and ERP), Chapter 10 (e-commerce), and Chapter 12 (cloud-based systems development).

• Social, Mobile, Local: New content in Chapter 10 describing how social tools, mobile technology, and location-based services are transforming e-commerce.

• Social Business: Expanded coverage of social business, introduced in Chapter 2 and discussed throughout the text. Detailed discussions of enterprise (internal corporate) social networking as well as social networking in e-commerce.

• Supervised learning
• Unsupervised learning
• Edge computing
• 5G networks
• General Data Protection Regulation (GDPR)
• Mobile device management (MDM)
• Data governance
• Dark web

The Laudon text, MyLab MIS, and eText provide the most up-to-date and comprehensive overview of information systems used by business firms today. After reading this book, we expect students will be able to participate in, and even lead,
management discussions of information systems for their firms and understand how to use information technology in their jobs to achieve bottom-line business results. Regardless of whether students are accounting, finance, management, operations management, marketing, or information systems majors, the knowledge and information in this book will be valuable throughout their business careers.

Solving Teaching and Learning Challenges

MyLab MIS is the teaching and learning platform that empowers you to reach every student. By combining trusted authors’ content with digital tools and a flexible platform, MyLab MIS personalizes the learning experience and improves results for each student. And with MIS Decision-Making Sims and auto-graded Excel and Access Projects, students understand how MIS concepts will help them succeed in their future careers.

The MyLab MIS and eText editions offer unique digital interactive features that hold student attention spans longer and make learning more effective, including 36 conceptual animations that walk students through key concepts in each chapter, 28 online video cases, and interactive quizzes. All of this is available anytime, anywhere, on any digital device. The result is a comprehensive learning environment that will heighten student engagement and learning in the MIS course.

The Laudon learning package is more current, real-world, and authoritative than competitors. Laudon Essentials 14e, MyLab MIS, and eText help students understand MIS concepts and issues through extensive use of real-world company examples, a wide variety of text and video cases based on real-world organizations, and numerous line art illustrations, interactive animations, and hands-on software projects.

The Laudons are known for their outstanding real-world case studies, which describe how well-known business firms are using IT to solve problems and achieve objectives. Students are often asked to analyze the business problem and propose alternative solutions. The Laudons also provide hands-on MIS software and management decision-making problems in each chapter that are based on real-world companies and business scenarios.

The Laudon text and learning package now has a very strong career focus, which incentivizes students to learn by showing exactly how each chapter will help them prepare for future jobs. In addition to Career Opportunities, MyLab MIS features Career Resources, including how to incorporate MIS knowledge into resumes, cover letters, and job interviews.

THE CORE TEXT

The Core text provides an overview of fundamental MIS concepts using an integrated framework for describing and analyzing information systems. This framework shows information systems composed of people, organization, and technology elements and is reinforced in student projects and case studies. The Core text consists of 12 chapters with hands-on projects covering the most essential topics in MIS. An important part of the Core text is the Video Case Study and Instructional Video Package: 28 video case studies (two to three per chapter) plus 10 instructional videos that illustrate business uses of information systems, explain new technologies, and explore concepts. Videos are keyed to the topics of each chapter.

Chapter Organization

Each chapter contains the following elements:

• A Chapter Outline based on Learning Objectives
• Lists of all the Case Studies and Video Cases for each chapter
• A chapter-opening case describing a real-world organization to establish the theme and importance of the chapter
• A diagram analyzing the opening case in terms of the people, organization, and technology model used throughout the text
A diagram accompanying each chapter-opening case graphically illustrates how people, organization, and technology elements work together to create an information system solution to the business challenges discussed in the case.

- Two Interactive Sessions with Case Study Questions
- A Career Opportunities section showing students how to use the text for job hunting and career preparation
- A Review Summary keyed to the Student Learning Objectives
- A list of Key Terms that students can use to review concepts
- Review questions for students to test their comprehension of chapter material
- Discussion questions raised by the broader themes of the chapter
- A series of Hands-on MIS Projects consisting of two Management Decision Problems, a hands-on application software project, and a project to develop Internet skills
- A Collaboration and Teamwork Project to develop teamwork and presentation skills with options for using open source collaboration tools
- A chapter-ending case study for students to apply chapter concepts
- Chapter references

**Student Learning-Focused**

Student Learning Objectives are organized around a set of study questions to focus student attention. Each chapter concludes with a Review Summary and Review Questions organized around these study questions, and each major chapter section is based on a Learning Objective.

**KEY FEATURES**

We have enhanced the text to make it more interactive, leading edge, and appealing to both students and instructors. The features and learning tools are described in the following sections.

**Business-Driven with Real-World Business Cases and Examples**

The text helps students see the direct connection between information systems and business performance. It describes the main business objectives driving the use of information systems and technologies in corporations all over the world: operational excellence, new products and services, customer and supplier intimacy, improved decision making, competitive advantage, and survival. In-text examples and case studies show students how specific companies use information systems to achieve these objectives.
We use current (2019) examples from business and public organizations throughout the text to illustrate the important concepts in each chapter. Most of the case studies describe companies or organizations that are familiar to students, such as Uber, Major League Baseball (MLB), Facebook, Walmart, Amazon, Google, Starbucks, and GE.

**Hands-On Text Activities**

Real-world business scenarios and data help students learn firsthand what MIS is all about. These projects heighten student involvement in this exciting subject.

- **Interactive Sessions.** Two short cases in each chapter have been redesigned as Interactive Sessions that can be used to stimulate student interest and active learning. Each case concludes with case study questions. The case study questions provide topics for discussion or written assignments.

- **Hands-On MIS Projects.** Every chapter concludes with a Hands-On MIS Projects section containing three types of projects: two Management Decision Problems; a hands-on application software exercise using Microsoft Excel, Access, or web page and blog creation tools; and a project that develops Internet business skills. Files for these projects are available in MyLab. As mentioned, the Dirt Bikes USA running case in MyLab MIS provides additional hands-on projects for each chapter.

- **Collaboration and Teamwork Projects.** Each chapter features a collaborative project that encourages students working in teams to use Google Drive, Google Docs, or other open source collaboration tools. The first team project in Chapter 1 asks students to build a collaborative Google site.
Case Study Questions encourage students to apply chapter concepts to real-world companies in class discussions, student presentations, or writing assignments.

### CASE STUDY QUESTIONS

1. Identify the problem described in this case study. Is it a people problem, an organizational problem, or a technology problem? Explain your answer.
2. What role has information technology and the IoT played in helping cities deal with their waste management problems? Describe the IT applications that are being used for this purpose.
3. How successful are these IT applications as a solution? Explain your answer.

Developing Career Skills

For students to succeed in a rapidly changing job market, they should be aware of their career options and how to go about developing a variety of skills. With MyLab MIS and Essentials of Management Information Systems, we focus on these skills in the following ways.

**CAREER OPPORTUNITIES AND RESOURCES**

Every student who reads this text wants to know: How will this book help my career? Our new Career Opportunities feature shows how to use this text, MyLab MIS, and eText as tools for job-hunting and career-building. Job interviewers will typically ask about why you want the job, along with your ability to communicate, multitask, work in a team, show leadership, solve problems, and meet goals. These are general skills and behaviors you’ll need to succeed in any job, and you should be prepared to provide examples from your course work and job experiences that demonstrate these skills. But there are also business knowledge and professional skills that employers will ask you about. Career Opportunities will show you how to use what you have learned in this text to demonstrate these skills.

---

**IMPROVING DECISION MAKING: USING WEB TOOLS TO CONFIGURE AND PRICE AN AUTOMOBILE**

Software skills: Internet-based software
Business skills: Researching product information and pricing

3-11 In this exercise, you will use software at car-selling websites to find product information about a car of your choice and use that information to make an important purchase decision. You will also evaluate two of these sites as selling tools.

You are interested in purchasing a new Ford Escape (or some other car of your choice). Go to the website of CarsDirect and begin your investigation.
The Career Opportunities section, identified by this icon 📚 is the last major section of each chapter under the heading “How will MIS help my career?”. There you will find a description of an entry-level job for a recent college graduate based on a real-world job description from major online job sites related to the topics covered in that chapter. The name of the company offering the job and its location have been changed. Each chapter’s job posting describes the required educational background and specific job skills, and suggests some of the business-related questions that might arise during the job interview. The authors provide tips for answering the questions and preparing for the interview. Career Opportunities also show where students can find out more information about the technical and business knowledge required for the job in this text and on the web and social media.

Below are the job descriptions used in this edition based on postings from both large and small businesses. A few of these jobs call for an MIS major, others for MIS course work, but many postings are not that specific. Some require some previous internship or job experience, but many are entry-level positions suitable for new college graduates, and some of these positions provide on-the-job training. However, all require knowledge of business information systems and applications and the ability to work in a digital environment.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Career Opportunity Job Description</th>
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<tbody>
<tr>
<td>1. Business Information Systems in Your Career</td>
<td>Financial Client Support and Sales Assistant</td>
</tr>
<tr>
<td>2. Global E-business and Collaboration</td>
<td>Entry Level Sales Support Specialist</td>
</tr>
<tr>
<td>3. Achieving Competitive Advantage with Information Systems</td>
<td>Entry Level Business Development Representative</td>
</tr>
<tr>
<td>4. Ethical and Social Issues in Information Systems</td>
<td>Junior Privacy Analyst</td>
</tr>
<tr>
<td>5. IT Infrastructure: Hardware and Software</td>
<td>Entry Level IT Consultant</td>
</tr>
<tr>
<td>6. Foundations of Business Intelligence: Databases and Information Management</td>
<td>Global Data Services Sales and Marketing Assistant</td>
</tr>
<tr>
<td>7. Telecommunications, the Internet, and Wireless Technology</td>
<td>Automotive Digital Advisor</td>
</tr>
<tr>
<td>8. Securing Information Systems</td>
<td>Entry Level Identity Access and Management Support Specialist</td>
</tr>
<tr>
<td>11. Improving Decision Making and Managing Artificial Intelligence</td>
<td>AI Technology Sales Assistant</td>
</tr>
<tr>
<td>12. Making the Business Case for Information Systems and Managing Projects</td>
<td>IT Project Management Assistant</td>
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</tbody>
</table>

Students can use Career Opportunities to shape their resumes and career plans as well as to prepare for interviews. For instructors, Career Opportunities are potential projects for student research and in-class discussion.

In MyLab MIS we have provided additional Career Resources, including job-hunting guides and instructions on how to build a Digital Portfolio demonstrating the business knowledge, application software proficiency, and Internet skills acquired from using the text. The portfolio can be included in a resume or job application or used as a learning assessment tool for instructors.
# Instructor Teaching Resources

<table>
<thead>
<tr>
<th>Supplements available to instructors at <a href="http://www.pearsonhighered.com/laudon">www.pearsonhighered.com/laudon</a></th>
<th>Features of the Supplement</th>
</tr>
</thead>
</table>
| Instructor’s Manual | • Chapter-by-chapter summaries  
• Examples and activities not in the main book  
• Teaching outlines  
• Teaching tips  
• Solutions to all questions and problems in the book |
| Test Bank  
authored by Professor Kenneth Laudon, New York University | The authors have worked closely with skilled test item writers to ensure that higher-level cognitive skills are tested. Test bank multiple-choice questions include questions on content but also include many questions that require analysis, synthesis, and evaluation skills.  
**AACSB Assessment Guidelines**  
As a part of its accreditation activities, the AACSB has developed an Assurance of Learning Program designed to ensure that schools do in fact teach students what they promise. Schools are required to state a clear mission, develop a coherent business program, identify student learning objectives, and then prove that students do in fact achieve the objectives.  
We have attempted in this book to support AACSB efforts to encourage assessment-based education. The end papers of this edition identify student learning objectives and anticipated outcomes for our Hands-On MIS projects. The authors will provide custom advice on how to use this text in colleges with different missions and assessment needs. Please e-mail the authors or contact your local Pearson representative for contact information. |
| Computerized TestGen | TestGen allows instructors to:  
• Customize, save, and generate classroom tests  
• Edit, add, or delete questions from the Test Item Files  
• Analyze test results  
• Organize a database of tests and student results |
| PowerPoints  
authored by Professor Kenneth Laudon, New York University | The authors have prepared a comprehensive collection of 50 PowerPoint slides for each chapter to be used in your lectures. Many of these slides are the same as used by Ken Laudon in his MIS classes and executive education presentations. Each of the slides is annotated with teaching suggestions for asking students questions, developing in-class lists that illustrate key concepts, and recommending other firms as examples in addition to those provided in the text. The annotations are like an Instructor’s Manual built into the slides and make it easier to teach the course effectively.  
**PowerPoints meet accessibility standards for students with disabilities. Features include but are not limited to:**  
• Keyboard and Screen Reader access  
• Alternative text for images  
• High color contrast between background and foreground colors |
# Learning Tracks

There are 53 Learning Tracks in MyLab MIS available to instructors and students.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Learning Tracks</th>
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<td>Chapter 2: Global E-business and Collaboration</td>
<td>Systems from a Functional Perspective &lt;br&gt;IT Enables Collaboration and Teamwork &lt;br&gt;Challenges of Using Business Information Systems &lt;br&gt;Challenges of Knowledge Management Systems &lt;br&gt;Organizing the Information Systems Function</td>
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<tr>
<td>Chapter 4: Ethical and Social Issues in Information Systems</td>
<td>Developing a Corporate Code of Ethics for IT</td>
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<tr>
<td>Chapter 5: IT Infrastructure: Hardware and Software</td>
<td>How Computer Hardware and Software Work &lt;br&gt;Service Level Agreements &lt;br&gt;Cloud Computing &lt;br&gt;The Open Source Software Initiative &lt;br&gt;The Evolution of IT Infrastructure &lt;br&gt;Technology Drivers of IT Infrastructure &lt;br&gt;Fourth Generation Languages</td>
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<tr>
<td>Chapter 6: Foundations of Business Intelligence: Databases and Information Management</td>
<td>Database Design, Normalization, and Entity-Relationship Diagramming &lt;br&gt;Introduction to SQL &lt;br&gt;Hierarchical and Network Data Models</td>
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<td>Chapter 7: Telecommunications, the Internet, and Wireless Technology</td>
<td>Broadband Network Services and Technologies &lt;br&gt;Cellular System Generations &lt;br&gt;Wireless Applications for Customer Relationship Management, Supply Chain Management, and Healthcare &lt;br&gt;Introduction to Web 2.0 &lt;br&gt;LAN Topologies</td>
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<tr>
<td>Chapter 8: Securing Information Systems</td>
<td>The Booming Job Market in IT Security &lt;br&gt;The Sarbanes-Oxley Act &lt;br&gt;Computer Forensics &lt;br&gt;General and Application Controls for Information Systems &lt;br&gt;Management Challenges of Security and Control &lt;br&gt;Software Vulnerability and Reliability</td>
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<tr>
<td>Chapter 11: Improving Decision Making and Managing Artificial Intelligence</td>
<td>Building and Using Pivot Tables &lt;br&gt;The Expert Systems Inference Engine &lt;br&gt;Case-Based Reasoning &lt;br&gt;Fuzzy Logic</td>
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<tr>
<td>Chapter 12: Making the Business Case for Information Systems and Managing Projects</td>
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### Video Cases and Instructional Videos

Instructors can download step-by-step instructions for accessing the video cases from the Instructor Resources Center.

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<td>Instructional Video: Tour IBM’s Raleigh Data Center</td>
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<td>Instructional Video: Meet the Hackers: Anonymous Statement on Hacking SONY</td>
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<td></td>
<td>Instructional Video: What is PaaS? What is Predix?</td>
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<tr>
<td></td>
<td>Instructional Video: BPM: Business Process Management Customer Story</td>
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</table>
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