Developing Spreadsheet-Based Decision Support Systems

Using Excel and VBA for Excel, 2nd Edition

Sandra D. Ekşioğlu, Michelle M.H. Şeref, Ravindra K. Ahuja, and Wayne L. Winston

Developing Spreadsheet-Based Decision Support Systems, 2nd Ed. is a comprehensive book which describes how to build decision support systems using the Excel spreadsheet framework, and illustrates it using several case studies arising in Operations Research, Industrial Engineering, and Business. A number of hands-on tutorials and examples illustrate the topics presented in each chapter. Each chapter contains numerous hands-on exercises for additional practice. This book is ideally suited as a textbook, can be used as a supplementary reference book, and can also be used as a self-study manual. The book website *www.dssbooks.com* contains supplementary material for students and instructors. The book contains three parts:

PART I—EXCEL ESSENTIALS: This part presents an overview of Excel basic and extended functionalities. The basic functionality topics include referencing and names, functions and formulas, charts, pivot tables. The extended functionality topics include statistical analysis, Risk Solver Platform for Education for modeling and solving optimization and simulation problems, and working with large datasets.

PART II—VBA FOR EXCEL: This part presents an overview of programming in VBA and manipulating Excel objects. Covered topics include macros, programming structures, building user interfaces, and using Object Oriented API in VBA for optimization and simulation.

PART III—CASE STUDIES: This part presents several case studies of decision support systems arising in different application settings. These case studies include inventory management, retirement planning, reliability analysis, warehouse layout, forecasting, and portfolio management.

NEW IN THIS EDITION:

PART I—Hands-on tutorials and exercises illustrate new tools of Excel 2010, such as, sparklines, pivot table slicer, new conditional formatting features, etc. The Risk Solver Platform for Education is used to model and solve optimization and simulation problems.

PART II—Object Oriented API with Risk Solver Platform is used to create, modify, and solve optimization and simulation models using VBA commands.

PART III—A number of case studies have been revised to use Risk Solver Platform for Education for optimization and simulation.

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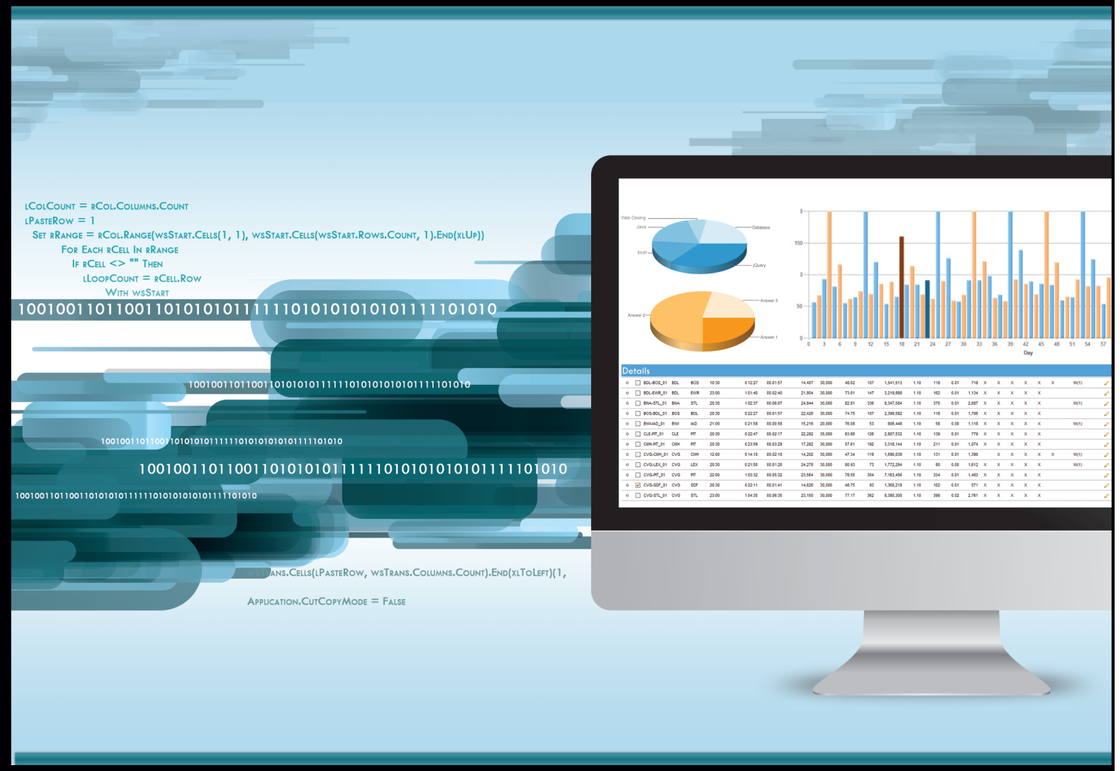

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