

Unit 14 Event Driven Programming Pearson Qualifications

Harness the power of multiple computers using Python through this fast-paced informative guide About This Book You'll learn to write data processing programs in Python that are highly available, reliable, and fault tolerant Make use of Amazon Web Services along with Python to establish a powerful remote computation system Train Python to handle data-intensive and resource hungry applications Who This Book Is For This book is for Python developers who have developed Python programs for data processing and now want to learn how to write fast, efficient programs that perform CPU-intensive data processing tasks. What You Will Learn Get an introduction to parallel and distributed computing See synchronous and asynchronous programming Explore parallelism in Python Distributed application with Celery Python in the Cloud Python on an HPC cluster Test and debug distributed applications In Detail CPU-intensive data processing tasks have become crucial considering the complexity of the various big data applications that are used today. Reducing the CPU utilization per process is very important to improve the overall speed of applications. This book will teach you how to perform parallel execution of computations by distributing them across multiple processors in a single machine, thus improving the overall performance of a big data processing task. We will cover synchronous and asynchronous models, shared memory and file systems, communication between various processes, synchronization, and more. Style and Approach This example based, step-by-step guide will show you how to make the best of your hardware configuration using Python for distributing applications.

'Downright revolutionary... the title is a major understatement... 'Quantum Programming' may ultimately change the way embedded software is designed.' -- Michael Barr, Editor-in-Chief, Embedded Systems Programming magazine ([Click here](#))

This book constitutes the proceedings of the 27th European Conference on Object-Oriented Programming, ECOOP 2013, held in Montpellier, France, in July 2013. The 29 papers presented in this volume were carefully reviewed and selected from 116 submissions. They are organized in topical sections on aspects, components, and modularity; types; language design; concurrency, parallelism, and distribution; analysis and verification; modelling and refactoring; testing, profiling, and empirical studies; and implementation.

A comprehensive guide to help you understand the principles of Reactive and asynchronous programming and its benefits Key Features Explore the advantages of Reactive programming Use concurrency and parallelism in RxPY to build powerful reactive applications Deploy and scale your reactive applications using Docker Book Description Reactive programming is central to many concurrent systems, but it's famous for its steep learning curve, which makes most developers feel like they're hitting a wall. With this book, you will get to grips with reactive programming by steadily exploring various concepts This

hands-on guide gets you started with Reactive Programming (RP) in Python. You will learn about the principles and benefits of using RP, which can be leveraged to build powerful concurrent applications. As you progress through the chapters, you will be introduced to the paradigm of Functional and Reactive Programming (FaRP), observables and observers, and concurrency and parallelism. The book will then take you through the implementation of an audio transcoding server and introduce you to a library that helps in the writing of FaRP code. You will understand how to use third-party services and dynamically reconfigure an application. By the end of the book, you will also have learned how to deploy and scale your applications with Docker and Traefik and explore the significant potential behind the reactive streams concept, and you'll have got to grips with a comprehensive set of best practices. What you will learn Structure Python code for better readability, testing, and performance Explore the world of event-based programming Grasp the use of the most common operators in Rx Understand reactive extensions beyond simple examples Master the art of writing reusable components Deploy an application on a cloud platform with Docker and Traefik Who this book is for If you are a Python developer who wants to learn Reactive programming to build powerful concurrent and asynchronous applications, this book is for you. Basic understanding of the Python language is all you need to understand the concepts covered in this book.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

Master today's required computer science topics while preparing for further study with Lambert's FUNDAMENTALS OF PYTHON: FIRST PROGRAMS. This book's easygoing approach is ideal for readers with any type of background. The approach starts with simple algorithmic code and then scales into working with functions, objects, and classes as the problems become more complex and require new abstraction mechanisms. Rather than working only with numeric or text-based applications like other introductions, this edition presents graphics, image manipulation, GUIs, and simple networked client/server applications. The author uses Python's standard Turtle graphics module to introduce graphics and to provide open source frameworks for easy image processing and GUI application development. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version. Practical UML Statecharts in C/C++ Second Edition bridges the gap between high-level abstract concepts of the Unified Modeling Language (UML) and the actual programming aspects of modern hierarchical state machines (UML statecharts). The book describes a lightweight, open source, event-driven infrastructure, called QP that enables direct manual coding UML statecharts and concurrent event-driven applications in C or C++ without big tools. This book is

presented in two parts. In Part I, you get a practical description of the relevant state machine concepts starting from traditional finite state automata to modern UML state machines followed by state machine coding techniques and state-machine design patterns, all illustrated with executable examples. In Part II, you find a detailed design study of a generic real-time framework indispensable for combining concurrent, event-driven state machines into robust applications. Part II begins with a clear explanation of the key event-driven programming concepts such as inversion of control (Hollywood Principle), blocking versus non-blocking code, run-to-completion (RTC) execution semantics, the importance of event queues, dealing with time, and the role of state machines to maintain the context from one event to the next. This background is designed to help software developers in making the transition from the traditional sequential to the modern event-driven programming, which can be one of the trickiest paradigm shifts. The lightweight QP event-driven infrastructure goes several steps beyond the traditional real-time operating system (RTOS). In the simplest configuration, QP runs on bare-metal microprocessor, microcontroller, or DSP completely replacing the RTOS. QP can also work with almost any OS/RTOS to take advantage of the existing device drivers, communication stacks, and other middleware. The accompanying website to this book contains complete open source code for QP, ports to popular processors and operating systems, including 80x86, ARM Cortex-M3, MSP430, and Linux, as well as all examples described in the book.

Expand Raspberry Pi capabilities with fundamental engineering principles
Exploring Raspberry Pi is the innovators guide to bringing Raspberry Pi to life. This book favors engineering principles over a 'recipe' approach to give you the skills you need to design and build your own projects. You'll understand the fundamental principles in a way that transfers to any type of electronics, electronic modules, or external peripherals, using a "learning by doing" approach that caters to both beginners and experts. The book begins with basic Linux and programming skills, and helps you stock your inventory with common parts and supplies. Next, you'll learn how to make parts work together to achieve the goals of your project, no matter what type of components you use. The companion website provides a full repository that structures all of the code and scripts, along with links to video tutorials and supplementary content that takes you deeper into your project. The Raspberry Pi's most famous feature is its adaptability. It can be used for thousands of electronic applications, and using the Linux OS expands the functionality even more. This book helps you get the most from your Raspberry Pi, but it also gives you the fundamental engineering skills you need to incorporate any electronics into any project. Develop the Linux and programming skills you need to build basic applications Build your inventory of parts so you can always "make it work" Understand interfacing, controlling, and communicating with almost any component Explore advanced applications with video, audio, real-world interactions, and more Be free to adapt and create with Exploring Raspberry Pi.

Organizations today often struggle to balance business requirements with ever-increasing volumes of data. Additionally, the demand for leveraging large-scale, real-time data is growing rapidly among the most competitive digital industries. Conventional system architectures may not be up to the task. With this practical guide, you'll learn how to leverage large-scale data usage across the business units in your organization using the principles of event-driven microservices. Author Adam Bellemare takes you through the process of building an event-driven microservice-powered organization. You'll reconsider how data is produced, accessed, and propagated across your organization. Learn powerful yet simple patterns for unlocking the value of this data. Incorporate event-driven design and architectural principles into your own systems. And completely rethink how your organization delivers value by unlocking near-real-time access to data at scale. You'll learn: How to leverage event-driven architectures to deliver exceptional business value The role of microservices in supporting event-driven designs Architectural patterns to ensure success both within and between teams in your organization Application patterns for developing powerful event-driven microservices Components and tooling required to get your microservice ecosystem off the ground

With contributions by Michael Ashikhmin, Michael Gleicher, Naty Hoffman, Garrett Johnson, Tamara Munzner, Erik Reinhard, Kelvin Sung, William B. Thompson, Peter Willemsen, Brian Wyvill. The third edition of this widely adopted text gives students a comprehensive, fundamental introduction to computer graphics. The authors present the mathematical foundations of computer graphics with a focus on geometric intuition, allowing the programmer to understand and apply those foundations to the development of efficient code. New in this edition: Four new contributed chapters, written by experts in their fields: Implicit Modeling, Computer Graphics in Games, Color, Visualization, including information visualization Revised and updated material on the graphics pipeline, reflecting a modern viewpoint organized around programmable shading. Expanded treatment of viewing that improves clarity and consistency while unifying viewing in ray tracing and rasterization. Improved and expanded coverage of triangle meshes and mesh data structures. A new organization for the early chapters, which concentrates foundational material at the beginning to increase teaching flexibility.

Ideal for novice and experienced programmers alike, this book shows readers how problem solving is the same in all computer languages—regardless of syntax. Using a step-by-step, generic, non-language-specific approach—with detailed explanations and many illustrations—it presents the tools and concepts required when using any programming language to develop computer applications. The focus throughout is on the use of problem solving tools—including problem analysis charts, interactivity (structure) charts, IPO charts, coupling diagrams, algorithms, flowcharts, and (in appendices) Universal Modeling Languages concepts, Nassi-Schneiderman charts, and Warnier-Orr diagrams. Techniques

are detailed for applications such as page layout, spreadsheets, database management systems, and document processing, and Putting It All Together sections show readers how to put individual problem-solving techniques together into viable strategies for tackling specific kinds of problems/applications. General Problem Solving Concepts. Programming Concepts. Problem Solving with the Sequential Logic Structure; with Decisions; with Loops; with the Case Logic Structure. Processing Arrays. Data Structures. Database Concepts. Concepts of Object Oriented Programming. Object Oriented Program Design. File Concepts. Sequential-Access File Applications. Sequential-Access File Updating. Random Access File Processing and Updating. Problem Solving for Word Processing and Desktop Publishing; for Spreadsheets; for Document Processing.

When you think about how far and fast computer science has progressed in recent years, it's not hard to conclude that a seven-year old handbook may fall a little short of the kind of reference today's computer scientists, software engineers, and IT professionals need. With a broadened scope, more emphasis on applied computing, and more than 70 chap

What is this book about? Expert One-on-One J2EE Development without EJB shows Javadevelopers and architects how to build robust J2EE applicationswithout having to use Enterprise JavaBeans (EJB). This practical,code-intensive guide provides best practices for using simpler andmore effective methods and tools, including JavaServer pages,servlets, and lightweight frameworks. What does this book cover? The book begins by examining the limits of EJB technology— what it does well and not so well. Then the authors guideyou through alternatives to EJB that you can use to create higherquality applications faster and at lower cost — both agilemethods as well as new classes of tools that have evolved over thepast few years. They then dive into the details, showing solutions based on thelightweight framework they pioneered on SourceForge — one ofthe most innovative open source communities. They demonstrate howto leverage practical techniques and tools, including the popularopen source Spring Framework and Hibernate. This book also guidesyou through productive solutions to core problems, such astransaction management, persistence, remoting, and Web tier design.You will examine how these alternatives affect testing,performance, and scalability, and discover how lightweightarchitectures can slash time and effort on many projects. What will you learn from this book? Here are some details on what you'll find in this book: How to find the simplest and most maintainable architecture foryour application Effective transaction management without EJB How to solve common problems in enterprise software developmentusing AOP and Inversion of Control Web tier design and the place of the Web tier in awell-designed J2EE application Effective data access techniques for J2EE applications withJDBC, Hibernate, and JDO How to leverage open source products to improve productivityand reduce custom coding How to design for optimal performance and scalability Provide beginning programmers with a guide to developing object-oriented

program logic with Farrell's AN OBJECT-ORIENTED APPROACH TO PROGRAMMING LOGIC AND DESIGN, 4E. This text takes a unique, language-independent approach to ensure students develop a strong foundation in traditional programming principles and object-oriented concepts before learning the details of a specific programming language. The author presents object-oriented programming terminology without highly technical language, making the book ideal for students with no previous programming experience. Common business examples clearly illustrate key points. The book begins with a strong object-oriented focus in updated chapters that make even the most challenging programming concepts accessible. A wealth of updated programming exercises in every chapter provide diverse practice opportunities, while new Video Lessons by the author clarify and expand on key topics. Use this text alone or with a language-specific companion text that emphasizes C++, Java or Visual Basic for the solid introduction to object-oriented programming logic your students need for success. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book constitutes the thoroughly refereed joint post-proceedings of the 15th International Conference on Applications of Declarative Programming and Knowledge Management, INAP 2004, and the 18th Workshop on Logic Programming, WLP 2004, held jointly in Potsdam, Germany in March 2004. The 18 revised full papers presented together with an invited tutorial lecture and an invited paper were selected during two rounds of reviewing and improvement. The papers are organized in topical sections on knowledge management and decision support, constraint programming and constraint solving, and declarative programming and Web-based systems.

This fully revised eighth edition of Joyce Farrell's PROGRAMMING LOGIC AND DESIGN: COMPREHENSIVE prepares student programmers for success by teaching them the fundamental principles of developing structured program logic. Widely used in foundational Programming courses, this popular text takes a unique, language-independent approach to programming, with a distinctive emphasis on modern conventions. Noted for its clear, concise writing style, the book eliminates highly technical jargon while introducing universal programming concepts and encouraging a strong programming style and logical thinking. This edition's comprehensive approach prepares students for all programming situations with introductions to object-oriented concepts, UML diagrams, and databases. Quick Reference boxes, a feature new to this edition, provide concise explanations of important programming concepts. Each chapter now also contains a Maintenance Exercise, in which the student is presented with working logic that can be improved. In addition to each chapter's text-based Debugging Exercises, this edition now includes Flowchart Debugging Exercises as well. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Get started with Twisted, the event-driven networking framework written in Python. With

this introductory guide, you'll learn the key concepts and design patterns to build event-driven client and server applications for many popular networking protocols. You'll also learn the tools to build new protocols using Twisted's primitives. Start by building basic TCP clients and servers, and then focus on deploying production-grade applications with the Twisted Application infrastructure. Along the way, you can play with and extend examples of common tasks you'll face when building network applications. If you're familiar with Python, you're ready for Twisted. Learn the core components of Twisted servers and clients Write asynchronous code with the Deferred API Construct HTTP servers with Twisted's high-level web APIs Use the Agent API to develop flexible web clients Configure and deploy Twisted services in a robust and standardized fashion Access databases using Twisted's nonblocking interface Add common server components: logging, authentication, threads and processes, and testing Explore ways to build clients and servers for IRC, popular mail protocols, and SSH

Hands-On Design Patterns with C# and .NET Core covers all the essential design patterns that help .NET developers build effective applications. The book will add to your skills by showing you how these patterns can be implemented easily in everyday programming, enabling you to develop robust applications with optimal performance. This high-powered book reveals the inside tips and techniques used by successful Turbo Pascal programmers. Helps users push the language to the limits. The most informative text for Turbo Pascal 5.0.

The two volumes LNCS 8805 and 8806 constitute the thoroughly refereed post-conference proceedings of 18 workshops held at the 20th International Conference on Parallel Computing, Euro-Par 2014, in Porto, Portugal, in August 2014. The 100 revised full papers presented were carefully reviewed and selected from 173 submissions. The volumes include papers from the following workshops: APCI&E (First Workshop on Applications of Parallel Computation in Industry and Engineering - BigDataCloud (Third Workshop on Big Data Management in Clouds) - DIHC (Second Workshop on Dependability and Interoperability in Heterogeneous Clouds) - FedICI (Second Workshop on Federative and Interoperable Cloud Infrastructures) - Hetero Par (12th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms) - HiBB (5th Workshop on High Performance Bioinformatics and Biomedicine) - LSDVE (Second Workshop on Large Scale Distributed Virtual Environments on Clouds and P2P) - MuCoCoS (7th International Workshop on Multi-/Many-core Computing Systems) - OMHI (Third Workshop on On-chip Memory Hierarchies and Interconnects) - PADAPS (Second Workshop on Parallel and Distributed Agent-Based Simulations) - PROPER (7th Workshop on Productivity and Performance) - Resilience (7th Workshop on Resiliency in High Performance Computing with Clusters, Clouds, and Grids) - REPPAR (First International Workshop on Reproducibility in Parallel Computing) - ROME (Second Workshop on Runtime and Operating Systems for the Many Core Era) - SPPEXA (Workshop on Software for Exascale Computing) - TASUS (First Workshop on Techniques and Applications for Sustainable Ultrascale Computing Systems) - UCHPC (7th Workshop on Unconventional High Performance Computing) and VHPC (9th Workshop on Virtualization in High-Performance Cloud Computing).

Knowledge processing and decision making in agent-based systems constitute the key components of intelligent machines. The contributions included in the book are:

Innovations in Knowledge Processing and Decision Making in Agent-Based Systems
Towards Real-World HTN Planning Agents Mobile Agent-Based System for Distributed
Software Maintenance Software Agents in New Generation Networks: Towards the
Automation of Telecom Processes Multi-agent Systems and Paraconsistent Knowledge
An Agent-based Negotiation Platform for Collaborative Decision-Making in Construction
Supply Chain An Event-Driven Algorithm for Agents at the Web A Generic Mobile Agent
Framework Toward Ambient Intelligence Developing Actionable Trading Strategies
Agent Uncertainty Model and Quantum Mechanics Representation Agent
Transportation Layer Adaptation System Software Agents to Enable Service
Composition through Negotiation Advanced Technology Towards Developing
Decentralized Autonomous Flexible Manufacturing Systems
Bradley provides concise coverage of all advanced level computer science
specification. The text is organised in short bite-sized chapters to facilitate rapid
learning, making it an ideal revision aid.

Today's software engineer must be able to employ more than one kind of software
process, ranging from agile methodologies to the waterfall process, from highly
integrated tool suites to refactoring and loosely coupled tool sets. Braude and
Bernstein's thorough coverage of software engineering perfects the reader's ability to
efficiently create reliable software systems, designed to meet the needs of a variety of
customers. Topical highlights . . . • Process: concentrates on how applications are
planned and developed • Design: teaches software engineering primarily as a
requirements-to-design activity • Programming and agile methods: encourages
software engineering as a code-oriented activity • Theory and principles: focuses on
foundations • Hands-on projects and case studies: utilizes active team or individual
project examples to facilitate understanding theory, principles, and practice In addition
to knowledge of the tools and techniques available to software engineers, readers will
grasp the ability to interact with customers, participate in multiple software processes,
and express requirements clearly in a variety of ways. They will have the ability to
create designs flexible enough for complex, changing environments, and deliver the
proper products.

Written in an easy-to-grasp language, the book brings to light the various topics
pertaining to Web engineering at one place in a comprehensive manner. The text,
organized in eleven chapters, enables its readers to analyze, model, design, code, test
and maintain their Web sites. Through its systematic presentation of topics, i.e., from
basic level to advanced level, the book apprises the readers with the finer points of the
various phases of Web development life cycle like Web analysis, Web design, Web
coding (Web technologies), Web testing and Web maintenance. The book is adaptive
enough for practical implementation of the concepts, thereby allowing its readers to
avoid or overcome hacking, to master client-side and server-side programming and to
develop good-quality Web applications. Using explicit descriptions and scripting
languages like VBScript, JavaScript and much more, this book is a must-have book for
all those who are associated with the field of Web engineering.

This book constitutes the refereed proceedings of the 17th International Conference on
Economics of Grids, Clouds, Systems, and Services, GECON 2020, held in Izola, Slovenia, in
September 2020. Due to COVID-19 pandemic the conference was held virtually by the
University of Ljubljana. The 11 full papers and 9 short papers presented in this book were

carefully reviewed and selected from 40 submissions. The papers are structured in selected topics, namely: Smartness in Distributed Systems; Decentralizing Clouds to Deliver Intelligence at the Edge; Digital Infrastructures for Pandemic Response and Countermeasures; Dependability and Sustainability; Economic Computing and Storage; Poster Session. For ease of use, this edition has been divided into the following subject sections: general principles; materials and processes; control, power electronics and drives; environment; power generation; transmission and distribution; power systems; sectors of electricity use. New chapters and major revisions include: industrial instrumentation; digital control systems; programmable controllers; electronic power conversion; environmental control; hazardous area technology; electromagnetic compatibility; alternative energy sources; alternating current generators; electromagnetic transients; power system planning; reactive power plant and FACTS controllers; electricity economics and trading; power quality. *An essential source of techniques, data and principles for all practising electrical engineers *Written by an international team of experts from engineering companies and universities *Includes a major new section on control systems, PLCs and microprocessors

Object-Oriented Programming under Windows presents object-oriented programming (OOP) techniques that can be used in Windows programming. The book is comprised of 15 chapters that tackle an area in OOP. Chapter 1 provides an introductory discourse about OOP, and Chapter 2 covers the programming languages. Chapter 3 deals with the Windows environment, while Chapter 4 discusses the creation of application. Windows and dialogue boxes, as well as controls and standard controls, are tackled. The book then covers menus and event response. Graphics operation, clipboard, bitmaps, icons, and cursors are also dealt with. The book also tackles disk file access, and then discusses the help file system. The last chapter covers data transfer. The text will be of great use to individuals who want to write Windows based programs.

High-Performance Data Network Design contains comprehensive coverage of network design, performance, and availability. Tony Kenyon provides the tools to solve medium- to large-scale data network design problems from the ground up. He lays out a practical and systematic approach that integrates network planning, research, design, and deployment, using state-of-the-art techniques in performance analysis, cost analysis, simulation, and topology modeling. The proliferation and complexity of data networks today is challenging our ability to design and manage them effectively. A new generation of Internet, e-commerce, and multimedia applications has changed traditional assumptions on traffic dynamics, and demands tight quality of service and security guarantees. These issues, combined with the economics of moving large traffic volumes across international backbones, mean that the demands placed on network designers, planners, and managers are now greater than ever before. High-Performance Data Network Design is a "must have" for anyone seriously involved in designing data networks. Together with the companion volume, Data Networks: Routing, Security, and Performance Optimization, this book gives readers the guidance they need to plan, implement, and optimize their enterprise infrastructure. · Provides real insight into the entire design process · Includes basic principles, practical advice, and examples of design for industrial-strength enterprise data networks · Integrates topics often overlooked—backbone optimization, bottleneck analysis, simulation tools, and network costing

This textbook, presented in a clear and friendly writing style, provides students of Class XI with a thorough introduction to the discipline of computer science. It offers accurate and balanced coverage of all the computer science topics as prescribed in the CBSE syllabus Code 083. Assuming no previous knowledge of computer science, this book discusses key computing concepts to provide invaluable insight into how computers work. It prepares students for the world of computing by giving them a solid foundation in programming concepts, operating systems, problem solving methodology, C++ programming language, data representation, and

computer hardware. KEY FEATURES • Explains theory in user friendly and easy-to-approach style • Teaches C++ from scratch; knowledge of C is not needed • Provides Programming Examples • Gives Practical Exercise • Provides Answers to Short Questions • Gives Practice Questions at the end of each chapter • Suitable for Self-Study

This standard textbook has been comprehensively revised by experienced teacher and examiner Sylvia Langfield. Arranged in five modules corresponding to the AQA specification, there are exercises and past exam questions at the end of each chapter.

This book presents a guide to the core features of Java – and some more recent innovations – enabling the reader to build skills and confidence through tried-and-trusted stages, supported by exercises that reinforce key learning points. All of the most useful and commonly applied Java syntax and libraries are introduced, along with many example programs that can provide the basis for more substantial applications. Use of the Eclipse IDE and the JUnit testing framework is integral to the book, ensuring maximum productivity and code quality, although to ensure that skills are not confined to one environment the fundamentals of the Java compiler and run time are also explained. Additionally, coverage of the Ant tool will equip the reader with the skills to automatically build, test and deploy applications independent of an IDE. Features: presents information on Java 7; contains numerous code examples and exercises; provides source code, self-test questions and PowerPoint slides at an associated website.

Summary Get Programming with Node.js teaches you to build web servers using JavaScript and Node. In this engaging tutorial, you'll work through eight complete projects, from writing the code for your first web server to adding live chat to a web app. Your hands will stay on the keyboard as you explore the most important aspects of the Node development process, including security, database management, authenticating user accounts, and deploying to production. You'll especially appreciate the easy-to-follow discussions, illuminating diagrams, and carefully explained code! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Node.js delivers the speed and reliability you need for ecommerce, social media, and gaming applications. It comes with thousands of prebuilt packages to help you get started immediately. If you want to use JavaScript on the server, Node.js is your choice. What's inside New features from ES2015 and later Writing asynchronous code Creating data models Debugging JavaScript modules About the Reader Written for front-end web developers with intermediate JavaScript skills. Table of Contents GETTING SET UP Lesson 0 - Setting up Node.js and the JavaScript engine Lesson 1 - Configuring your environment Lesson 2 - Running a Node.js application UNIT 1 - GETTING STARTED WITH NODE.JS Lesson 3 - Creating a Node.js module Lesson 4 - Building a simple web server in Node.js Lesson 5 - Handling incoming data Lesson 6 - Writing better routes and serving external files Lesson 7 - Capstone: Creating your first web application UNIT 2 - EASIER WEB DEVELOPMENT WITH EXPRESS.JS Lesson 8 - Setting up an app with Express.js Lesson 9 - Routing in Express.js Lesson 10 - Connecting views with templates Lesson 11 - Configurations and error handling Lesson 12 - Capstone: Enhancing the Confetti Cuisine site with Express.js UNIT 3 - CONNECTING TO A DATABASE Lesson 13 - Setting up a MongoDB database Lesson 14 - Building models with Mongoose Lesson 15 - Connecting controllers and models Using promises with Mongoose Lesson 16 - Capstone: Saving user subscriptions UNIT 4 - BUILDING A USER MODEL Lesson 17 - Improving your data models Lesson 18 - Building the user model Lesson 19 - Creating and reading your models Lesson 20 - Updating and deleting your models Lesson 21 - Capstone: Adding CRUD models to Confetti Cuisine Creating controllers UNIT 5 - AUTHENTICATING USER ACCOUNTS Lesson 22 - Adding sessions and flash messages Lesson 23 - Building a user login and hashing passwords Lesson 24 - Adding user authentication Lesson 25 - Capstone: Adding user authentication to Confetti Cuisine UNIT 6 - BUILDING AN API Lesson 26 - Adding an API to your application Lesson 27 - Accessing your API from your application Lesson 28 - Adding API security Lesson

29 - Capstone: Implementing an API UNIT 7 - ADDING CHAT FUNCTIONALITY Lesson 30 - Working with Socket.io Lesson 31 - Saving chat messages Lesson 32 - Adding a chat notification indicator UNIT 8 - DEPLOYING AND MANAGING CODE IN PRODUCTION Lesson 33 - Capstone: Adding a chat feature to Confetti Cuisine Lesson 34 - Deploying your application Lesson 35 - Managing in production Lesson 36 - Testing your application Lesson 37 - Capstone: Deploying Confetti Cuisine

Introducing programmers to the new development environment for Windows that allows creation of high-performance applications, a book and disk explore Delphi's features and show how to construct one hundred step-by-step examples, from basic programming to complex Windows applications. Original. (All Users).

Presents information on how to program software for iOS applications, covering such topics as object-oriented design principles, using Xcode, developing an Apps user interface, and harnessing iOS device capabilities.

Knowledge Processing and Decision Making in Agent-Based Systems Springer Science & Business Media

This book constitutes the joint refereed proceedings of the 14th International Conference on Next Generation Wired/Wireless Advanced Networks and Systems, NEW2AN 2014, and the 7th Conference on Internet of Things and Smart Spaces, ruSMART 2014, held in St. Petersburg, Russia, in August 2014. The total of 67 papers was carefully reviewed and selected for inclusion in this book. The 15 papers selected from ruSMART are organized in topical sections named: smart spaces core technologies, smart spaces for geo-location and e-tourism apps, smart space supporting technologies, and video solutions for smart spaces. The 52 papers from NEW2AN deal with the following topics: advances in wireless networking, ad hoc networks and enhanced services, sensor- and machine-type communication, networking architectures and their modeling, traffic analysis and prediction, analytical methods for performance evaluation, materials for future communications, generation and analysis of signals, business aspects of networking, progress on upper layers and implementations, modeling methods and tools, techniques, algorithms, and control problems, photonics and optics, and signals and their processing.

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