

Django Documentation

How can you take advantage of the Django framework to integrate complex client-side interactions and real-time features into your web applications? Through a series of rapid application development projects, this hands-on book shows experienced Django developers how to include REST APIs, WebSockets, and client-side MVC frameworks such as Backbone.js into new or existing projects. Learn how to make the most of Django's decoupled design by choosing the components you need to build the lightweight applications you want. Once you finish this book, you'll know how to build single-page applications that respond to interactions in real time. If you're familiar with Python and JavaScript, you're good to go. Learn a lightweight approach for starting a new Django project Break reusable applications into smaller services that communicate with one another Create a static, rapid prototyping site as a scaffold for websites and applications Build a REST API with django-rest-framework Learn how to use Django with the Backbone.js MVC framework Create a single-page web application on top of your REST API Integrate real-time features with WebSockets and the Tornado networking library Use the book's code-driven examples in your own projects

* Quick start to learning python—very example oriented approach * Book has its own Web site established by the author: <http://diveintopython.org/> Author is well known in the Open Source community and the book has a unique quick approach to learning an object oriented language.

Learn Django 2.0 with four end-to-end projects Key Features Learn Django by building real-world web applications from scratch Develop powerful web applications quickly using the best coding practices Integrate other technologies into your application with clear, step-by-step explanations and comprehensive example code Book Description If you want to learn about the entire process of developing professional web applications with Django, then this book is for you. This book will walk you through the creation of four professional Django projects, teaching you how to solve common problems and implement best practices. You will learn how to build a blog application, a social image-bookmarking website, an online shop, and an e-learning platform. The book will teach you how to enhance your applications with AJAX, create RESTful APIs, and set up a production environment for your Django projects. The book walks you through the creation of real-world applications, while solving common problems and implementing best practices. By the end of this book, you will have a deep understanding of Django and how to build advanced web applications What you will learn Build practical, real-world web applications with Django Use Django with other technologies, such as Redis and Celery Develop pluggable Django applications Create advanced features, optimize your code, and use the cache framework Add internationalization to your Django projects Enhance your user experience using JavaScript and AJAX Add social features to your projects Build RESTful APIs for your applications Who this book is for If you are a web developer who wants to see how to build professional sites with Django, this book is for you. You will need a basic knowledge of Python, HTML, and JavaScript, but you don't need to have worked with Django before.

As two of the leading MVC web frameworks for Python, Django and TurboGears allow you to develop and launch sites in a fraction of the time compared to traditional techniques and they provide greater stability, scalability, and management than alternatives. Packed with examples, this book will help you discover a new methodology for designing, coding, testing, and deploying rich web applications. A team of expert authors shows you the power of MVC frameworks and the capabilities of the TurboGears and Django packages. The Django chapters show you how to automate production of common web development tasks, portal creation, and content management, so you can focus on higher-level application issues and design. The TurboGears chapters illustrate how to rapidly create modern, highly interactive Web 2.0 applications. For both frameworks, you'll create useful applications that exemplify common Web 2.0 design paradigms and their solutions. Ultimately, you'll leverage your Python skills using Django and TurboGears and go from novice to RIA expert. What you will learn from this book * How you can use frameworks to save you time and frustration in the development cycle * The elements, differences, and similarities of the TurboGears and Django frameworks * Advanced capabilities of both frameworks and how they easily solve issues common to web applications * Approaches to simplifying your client side JavaScript(r) with MochiKit, a Pythonic JavaScript library * How to pair TurboGears with Flash for even more possibilities Who this book is for This book is for Python developers who want to learn rapid Web 2.0 development techniques using frameworks and incorporating a model-view-controller architecture. Wrox Professional guides are planned and written by working programmers to meet the real-world needs of programmers, developers, and IT professionals. Focused and relevant, they address the issues technology professionals face every day. They provide examples, practical solutions, and expert education in new technologies, all designed to help programmers do a better job.

Looking for a way to invigorate your technical writing team and grow that expertise to include developers, designers, and writers of all backgrounds? When you treat docs like code, you multiply everyone's efforts and streamline processes through collaboration, automation, and innovation. Second edition now available with updates and more information about version control for documents and continuous publishing.

This book constitutes the refereed proceedings of the 12th International Conference on Intelligent Computer Mathematics, CICM 2019, held in Prague, Czech Republic, in July 2019. The 19 full papers presented were carefully reviewed and selected from a total of 41 submissions. The papers focus on digital and computational solutions which are becoming the prevalent means for the generation, communication, processing, storage and curation of mathematical information. Separate communities have developed to investigate and build computer based systems for computer algebra, automated deduction, and mathematical publishing as well as novel user interfaces. While all of these systems excel in their own right, their integration can lead to synergies offering significant added value.

Over 70 practical recipes to help you create scalable websites using the Django 1.8 framework About This Book This is the latest book on the market that will help you take advantage of the new features added to Django 1.8 This book consists of recipes of varying complexities to help you create multilingual, responsive, and scalable websites with Django This updated edition teaches you major Django functions and will help you improve your skills by developing models, forms, views, and templates Who This Book Is For This book is for intermediate-level and professional Django users who need to build projects that are multilingual, functional on devices of different screen sizes, and that scale over a period of time. If you have created websites with Django but you want to sharpen your knowledge and learn some good approaches to different aspects of web development, you should definitely read this book. What You Will Learn Get started with the basic configuration necessary to start any Django project Build a database structure out of reusable model mixins Manage forms and views and get to know some useful patterns that are used to

create them Create handy template filters and tags that you can reuse in every project Integrate your own functionality into the Django CMS Manage hierarchical structures with MPTT Import data from local sources and external web services as well as exporting your data to third parties Implement a multilingual search with Haystack Test and deploy your project efficiently In Detail Django is a web framework that was designed to strike a balance between rapid web development and high performance. It has the capacity to handle applications with high levels of user traffic and interaction, and can integrate with massive databases on the backend, constantly collecting and processing data in real time. Through this book, you'll discover that collecting data from different sources and providing it to others in different formats isn't as difficult as you thought. It follows a task-based approach to guide you through all the web development processes using the Django framework. We'll start by setting up the virtual environment for a Django project and configuring it. Then you'll learn to write reusable pieces of code for your models and find out how to manage database schema changes using South migrations. After that, we'll take you through working with forms and views to enter and list data. With practical examples on using templates and JavaScript together, you will discover how to create the best user experience. In the final chapters, you'll be introduced to some programming and debugging tricks and finally, you will be shown how to test and deploy the project to a remote dedicated server. By the end of this book, you will have a good understanding of the new features added to Django 1.8 and be an expert at web development processes. Style and approach Every chapter consists of practical examples and a mix of basic and advanced recipes that will guide you through the entire web development process, starting from project configuration and taking you right through to deployment.

Learn how to leverage Django, the leading Python web application development framework, to its full potential in this advanced tutorial and reference. Updated for Django 1.5 and Python 3, Pro Django, Second Edition examines in great detail the complex problems that Python web application developers can face and how to solve them. It provides in-depth information about advanced tools and techniques available in every Django installation, running the gamut from the theory of Django's internal operations to actual code that solves real-world problems for high-volume environments. Pro Django, Second Edition goes above and beyond other books, leaving the basics far behind and showing how Django can do things even its core developers never expected. By drawing on the dynamic nature of Python, you can write Django applications that stretch the limits of what you thought possible! What you'll learn Use Django's models, views, forms, and templates Handle HTTP and customizing back ends Get the most out of Django's common tooling Employ Django in various environments Build an API using Django's own components Make this code reusable—even distributable Who this book is for This book is for companies looking for a framework capable of supporting enterprise needs, as well as advanced Python or web developers looking to solve unusual, complex problems. Table of Contents Understanding Django Django Is Python Models URLs and Views Forms Templates Handling HTTP Backend Protocols Common Tools Coordinating Applications Enhancing Applications

A step-by-step that will help you build Microservices architecture using Django and Python KEY FEATURES - Understand in-depth the fundamentals of Microservices - Learn how to create and use Django APIs - Use web technology such as Nginx, Gunicorn, UWSGI, and Postgresql to deploy a Django project DESCRIPTION Microservices architectures solve the multiple problems of software architecture. Django is a full-stack development framework, written in python. This book includes everything necessary for web application development; from the user views to the information storage: model, persistence, relationships, controllers, forms, validations, rest API and a very useful back office. Furthermore, the book will show how to build production-ready microservices. It will help you create restful APIs and get familiar with Redis and Celery. Towards the end, the book will show how to secure these services and deploy these microservices using Django. Lastly, it will show how to scale our services. WHAT WILL YOU LEARN - Understand the basics of Python, Django, and Microservices - Learn how to deploy Microservices with Django - Get familiar with Microservices Architecture - Designing, Principles, and Requirements - Implement Asynchronous task, JWT API Authentication and AWS Serverless with Microservice architecture WHO THIS BOOK IS FOR This book is for those beginners who want to make their careers in software development. It starts from the basics of python and Django, takes the reader to the Microservices architecture. Table of Contents 1. Basic of Python 2. Major Pillars of OOPS with Python 3. Getting Started with Django 4. API Development with Django 5. Database Modeling with Django 6. First Django API Deployment on Web 7. Django Project Deployment on various web servers 8. What are Microservices 9. Designing Microservice Systems 10. Service Authentication 11. Microservices Deployment With Django 12. JWT Auth Service 13. Asynchronous Tasks 14. AWS Serverless 15. How to Adopt Microservices in Practice

As one of today's cloud computing services, Google App Engine does more than provide access to a large system of servers. It also offers you a simple model for building applications that scale automatically to accommodate millions of users. With Programming Google App Engine, you'll get expert practical guidance that will help you make the best use of this powerful platform. Google engineer Dan Sanderson shows you how to design your applications for scalability, including ways to perform common development tasks using App Engine's APIs and scalable services. You'll learn about App Engine's application server architecture, runtime environments, and scalable datastore for distributing data, as well as techniques for optimizing your application. App Engine offers nearly unlimited computing power, and this book provides clear and concise instructions for getting the most from it right from the source. Discover the differences between traditional web development and development with App Engine Learn the details of App Engine's Python and Java runtime environments Understand how App Engine handles web requests and executes application code Learn how to use App Engine's scalable datastore, including queries and indexes, transactions, and data modeling Use task queues to parallelize and distribute work across the infrastructure Deploy and manage applications with ease

This volume provides an overview and an understanding of REST (Representational State Transfer). Discussing the constraints of REST the book focuses on REST as a type of web architectural style. The focus is on applying REST beyond Web applications (i.e., in enterprise environments), and in reusing established and well-understood design patterns when doing so. The reader will be able to understand how RESTful systems can be designed and deployed, and what the results are in terms of benefits and challenges encountered in the process. Since REST is relatively new as an approach for designing Web Services, the more advanced part of the book collects a number of challenges to some of the assumptions and constraints of REST, and looks at current research work on how REST can be extended and applied to scenarios that often are considered not to be a good match for REST. This work will help readers to reach a deeper understanding of REST on a practical as well as on an advanced level. Beginning Django E-Commerce guides you through producing an e-commerce site using Django, the most popular Python web development framework. Topics covered include how to make a shopping cart, a checkout, and a payment processor; how to

make the most of Ajax; and search engine optimization best practices. Throughout the book, you'll take each topic and apply it to build a single example site, and all the while you'll learn the theory behind what you're architecting. Build a fully functional e-commerce site. Learn to architect your site properly to survive in an increasingly competitive online landscape with good search engine optimization techniques. Become versed in the Django web framework and learn how you can put it to use to drastically reduce the amount of work you need to do to get a site up and running quickly.

This book teaches by example. It walks in detail through development of a sample application, illustrating each step via complete working code and either screenshots or console snippets. The cumbersome and time consuming task of debugging will be a cake walk with this book. If you are a Django application developer who wants to create robust applications quickly that work well and are easy to maintain in the long term, this book is for you. This book is the right pick if you want to be smartly tutored to make best use of Django's rich testing and debugging support and make testing an effortless task. Basic knowledge of Python, Django, and the overall structure of a database-driven web application is assumed. However, the code samples are fully explained so that even beginners who are new to the area can learn a great deal from this book.

Over 79 hands-on recipes for professional embedded Linux developers to optimize and boost their Yocto Project know-how Key Features Optimize your Yocto setup to speed up development and debug build issues Use what is quickly becoming the standard embedded Linux product builder framework—the Yocto Project Recipe-based implementation of best practices to optimize your Linux system Book Description The Yocto Project has become the de facto distribution build framework for reliable and robust embedded systems with a reduced time to market. You'll get started by working on a build system where you set up Yocto, create a build directory, and learn how to debug it. Then, you'll explore everything about the BSP layer, from creating a custom layer to debugging device tree issues. In addition to this, you'll learn how to add a new software layer, packages, data, scripts, and configuration files to your system. You will then cover topics based on application development, such as using the Software Development Kit and how to use the Yocto project in various development environments. Toward the end, you will learn how to debug, trace, and profile a running system. This second edition has been updated to include new content based on the latest Yocto release. What you will learn Optimize your Yocto Project setup to speed up development and debug build issues Use Docker containers to build Yocto Project-based systems Take advantage of the user-friendly Toaster web interface to the Yocto Project build system Build and debug the Linux kernel and its device trees Customize your root filesystem with already-supported and new Yocto packages Optimize your production systems by reducing the size of both the Linux kernel and root filesystems Explore the mechanisms to increase the root filesystem security Understand the open source licensing requirements and how to comply with them when cohabiting with proprietary programs Create recipes, and build and run applications in C, C++, Python, Node.js, and Java Who this book is for If you are an embedded Linux developer with the basic knowledge of Yocto Project, this book is an ideal way to broaden your knowledge with recipes for embedded development.

This latest edition of The Definitive Guide to Django is updated for Django 1.1, and, with the forward-compatibility guarantee that Django now provides, should serve as the ultimate tutorial and reference for this popular framework for years to come. Django, the Python-based equivalent to Ruby's Rails web development framework, is one of the hottest topics in web development today. Lead developer Jacob Kaplan-Moss and Django creator Adrian Holovaty show you how they use this framework to create award-winning web sites by guiding you through the creation of a web application reminiscent of ChicagoCrime.org. The Definitive Guide to Django is broken into three parts, with the first introducing Django fundamentals such as installation and configuration, and creating the components that together power a Django-driven web site. The second part delves into the more sophisticated features of Django, including outputting non-HTML content such as RSS feeds and PDFs, caching, and user management. The appendixes serve as a detailed reference to Django's many configuration options and commands.

Hands-on Application Development with PyCharm addresses the modern-age enterprise application development concerns and how to solve them using a variety of features and functionalities available in PyCharm. This book will help you master the art of developing and delivering production-ready and real-world python applications to your clients.

Learn Django 3 with four end-to-end web projects Key Features Learn Django 3 by building real-world web applications from scratch in Python, using coding best practices Integrate other technologies into your application with clear, step-by-step explanations and comprehensive example code Implement advanced functionalities like a full-text search engine, a user activity stream, or a recommendation engine Add real-time features with Django Channels and WebSockets Book Description If you want to learn the entire process of developing professional web applications with Python and Django, then this book is for you. In the process of building four professional Django projects, you will learn about Django 3 features, how to solve common web development problems, how to implement best practices, and how to successfully deploy your applications. In this book, you will build a blog application, a social image bookmarking website, an online shop, and an e-learning platform. Step-by-step guidance will teach you how to integrate popular technologies, enhance your applications with AJAX, create RESTful APIs, and set up a production environment for your Django projects. By the end of this book, you will have mastered Django 3 by building advanced web applications. What you will learn Build real-world web applications Learn Django essentials, including models, views, ORM, templates, URLs, forms, and authentication Implement advanced features such as custom model fields, custom template tags, cache, middleware, localization, and more Create complex functionalities, such as AJAX interactions, social authentication, a full-text search engine, a payment system, a CMS, a RESTful API, and more Integrate other technologies, including Redis, Celery, RabbitMQ, PostgreSQL, and Channels, into your projects Deploy Django projects in production using NGINX, uWSGI, and Daphne Who this book is for This book is intended for developers with Python knowledge who wish to learn Django in a pragmatic way. Perhaps you are completely new to Django, or you already know a little but you want to get the most out of it. This book will help you to master the most relevant areas of the framework by building practical projects from scratch. You need to have familiarity with programming concepts in order to read this book. Some previous knowledge of HTML and JavaScript is assumed. Django 3 Practical Ebook for people who want to learn django for building applications

Learn how to rapidly build your own ecommerce site by applying Django's battle-tested components. This book demonstrates Django's features and conventions to help you develop modern web applications quickly. You'll adopt a "learn by doing" approach and gain a deeper understanding Django by working through a project in which the real-time component will be critical. The book starts with the basics and explains the difference between a Django project and a Django app, the most important settings, how to change them, and the fundamentals of packaging. You'll then be introduced to all the standard tools of Django, along with a sample project. The book then moves on to Channels, a recent addition to the Django ecosystem. It extends the framework with

support for real-time operations such as Websockets and other asynchronous features. Practical Django 2 and Channels 2 provides the practical concepts needed to create complex, database-driven websites as easily as possible. What You'll Learn Build and deploy a simple company site with Django Develop more complex, data-heavy sites using the Django ORM Integrate Django with Channels Unit-test your solutions Who This Book Is For Python developers and web developers wanting to learn Django 2 and Channels 2

Build a Django content management system, blog, and social networking site with James Bennett as he introduces version 1.1 of the popular Django framework. You'll work through the development of each project, implementing and running the applications while learning new features along the way. Web frameworks are playing a major role in the creation of today's most compelling web applications, because they automate many of the tedious tasks, allowing developers to instead focus on providing users with creative and powerful features. Python developers have been particularly fortunate in this area, having been able to take advantage of Django, a very popular open-source web framework whose stated goal is to "make it easier to build better web applications more quickly with less code." Practical Django Projects introduces this popular framework by way of a series of real-world projects. Readers follow along with the development of each project, implementing and running each application while learning new features along the way. This edition is updated for Django 1.1 and includes an all-new chapter covering practical development tools and techniques you'll be able to apply to your own development workflow.

"Every developer working with the Web needs to read this book." -- David Heinemeier Hansson, creator of the Rails framework "RESTful Web Services finally provides a practical roadmap for constructing services that embrace the Web, instead of trying to route around it." -- Adam Trachtenberg, PHP author and eBay Web Services Evangelist You've built web sites that can be used by humans. But can you also build web sites that are usable by machines? That's where the future lies, and that's what RESTful Web Services shows you how to do. The World Wide Web is the most popular distributed application in history, and Web services and mashups have turned it into a powerful distributed computing platform. But today's web service technologies have lost sight of the simplicity that made the Web successful. They don't work like the Web, and they're missing out on its advantages. This book puts the "Web" back into web services. It shows how you can connect to the programmable web with the technologies you already use every day. The key is REST, the architectural style that drives the Web. This book: Emphasizes the power of basic Web technologies -- the HTTP application protocol, the URI naming standard, and the XML markup language Introduces the Resource-Oriented Architecture (ROA), a common-sense set of rules for designing RESTful web services Shows how a RESTful design is simpler, more versatile, and more scalable than a design based on Remote Procedure Calls (RPC) Includes real-world examples of RESTful web services, like Amazon's Simple Storage Service and the Atom Publishing Protocol Discusses web service clients for popular programming languages Shows how to implement RESTful services in three popular frameworks -- Ruby on Rails, Restlet (for Java), and Django (for Python) Focuses on practical issues: how to design and implement RESTful web services and clients This is the first book that applies the REST design philosophy to real web services. It sets down the best practices you need to make your design a success, and the techniques you need to turn your design into working code. You can harness the power of the Web for programmable applications: you just have to work with the Web instead of against it. This book shows you how.

Develop standalone Django apps to serve as the reusable building blocks for larger Django projects. This book explores best practices for publishing these apps, with special considerations for testing Django apps, and strategies for extracting existing functionality into a separate package. This jumpstart reference is divided into four distinct and sequential sections, all containing short, engaging chapters that can be read in a modular fashion, depending on your level of experience. The first section covers the structure and scope of standalone Django apps. The second section digs into questions about pulling code out of existing projects and into new standalone apps for reuse. The third section details additional, advanced technical best practices toward making standalone apps as broadly useful as possible. The fourth and final section covers strategies for managing a published Django app. Django Standalone Apps is the perfect resource for developers who have at least some prior experience working with Django web applications and want to simplify their deployments and share their knowledge as open source packages. What You'll Learn Scope a standalone Django app project for optimum usefulness Extract code from existing projects to reuse Test a standalone app outside of your Django project Reuse your own code for increased delivery cadence and code quality Review best practices for maintaining a Django app package Who This Book Is For Professional developers who work with Django. Deep expertise is not required or expected, but readers should have working familiarity with Django.

Django is an amazingly powerful system for creating modern, dynamic websites. But programming Django hasn't always been easy—until now. Django Unleashed is your step-by-step, beginner-friendly guide to leveraging Django's core capabilities and its powerful contributed library. You'll learn in the most effective way possible: hands on, by building a fully functional Django website from scratch. You'll even deploy the website to the cloud. As you build your website, expert Django consultant and trainer Andrew Pinkham reveals how websites operate; how Django makes building websites easy; how to write Python code that leverages its immense capabilities; and how to build solutions that are robust, reliable, and secure. You'll start simply and learn to solve increasingly challenging problems: mastering new features and understanding how Django's architecture shapes their behavior, and gaining essential knowledge for working with any web framework, not just Django.

Being a beginner's guide this book has a very simple and clear approach. It is a practical guide that will help you learn the features of Django and help you build a dynamic website using those features. This book is for web developers who want to see how to build a complete site with Web 2.0 features, using the power of a proven and popular development system, but do not necessarily want to learn how a complete framework functions in order to do this. Basic knowledge of Python development is required for this book, but no knowledge of Django is expected.

Using the simple, robust, Python-based Django framework, you can build powerful Web solutions with remarkably few lines of code. In Python Web Development with Django®, three experienced Django and Python developers cover all the techniques, tools, and concepts you need to make the most of Django 1.0, including all the major features of the new release. The authors teach Django through in-depth explanations, plus provide extensive sample code supported with images and line-by-line explanations. You'll discover how Django leverages Python's development speed and flexibility to help you solve a wide spectrum of Web development problems and learn Django best practices covered nowhere else. You'll build your first Django application in just minutes and deepen your real-world skills through start-to-finish application projects including Simple Web log (blog) Online photo gallery Simple content management system Ajax-powered live blogger Online source code sharing/syntax

highlighting tool How to run your Django applications on the Google App Engine This complete guide starts by introducing Python, Django, and Web development concepts, then dives into the Django framework, providing a deep understanding of its major components (models, views, templates), and how they come together to form complete Web applications. After a discussion of four independent working Django applications, coverage turns to advanced topics, such as caching, extending the template system, syndication, admin customization, and testing. Valuable reference appendices cover using the command-line, installing and configuring Django, development tools, exploring existing Django applications, the Google App Engine, and how to get more involved with the Django community. Introduction 1 Part I: Getting Started Chapter 1: Practical Python for Django 7 Chapter 2: Django for the Impatient: Building a Blog 57 Chapter 3: Starting Out 77 Part II: Django in Depth Chapter 4: Defining and Using Models 89 Chapter 5: URLs, HTTP Mechanisms, and Views 117 Chapter 6: Templates and Form Processing 135 Part III: Django Applications by Example Chapter 7: Photo Gallery 159 Chapter 8: Content Management System 181 Chapter 9: Liveblog 205 Chapter 10: Pastebin 221 Part IV: Advanced Django Techniques and Features Chapter 11: Advanced Django Programming 235 Chapter 12: Advanced Django Deployment 261 Part V: Appendices Appendix A: Command Line Basics 285 Appendix B: Installing and Running Django 295 Appendix C: Tools for Practical Django Development 313 Appendix D: Finding, Evaluating, and Using Django Applications 321 Appendix E: Django on the Google App Engine 325 Appendix F: Getting Involved in the Django Project 337 Index 339 Colophon 375

Build a website with Django 3 is the fourth edition of my popular Django beginners book, fully updated for Django 3 Not only has the book been updated to cover the latest version of Django, but I've added install instructions for macOS users. Your complete introduction to Django 3 Build a website with Django 3 covers all the core concepts of Django to get you up and running fast: - Why Django is the premier Python framework for developing web applications - The big picture - how Django is structured - Django Models - Django Views - Django Templates - The Django admin - Generic views - Simple forms - Complex forms and model forms - Managing Users - Restricted content - File uploads - Sending email - Deploying a Django application Build a real website This book is not about boring theory. You'll be building a fully functioning website as you learn Django. I even show you how to deploy your website to the Internet for free.

The Definitive Guide to Django Web Development Done Right Apress

Django is the leading Python web application development framework. Learn how to leverage the Django web framework to its full potential in this advanced tutorial and reference. Endorsed by Django, Pro Django more or less picks up where The Definitive Guide to Django left off and examines in greater detail the unusual and complex problems that Python web application developers can face and how to solve them. Provides in-depth information about advanced tools and techniques available in every Django installation Runs the gamut from the theory of Django's internal operations to actual code that solves real-world problems for high-volume environments Goes above and beyond other books, leaving the basics behind Shows how Django can do things even its core developers never dreamed possible

Internet of Things (IoT) refers to physical and virtual objects that have unique identities and are connected to the internet to facilitate intelligent applications that make energy, logistics, industrial control, retail, agriculture and many other domains "smarter". Internet of Things is a new revolution of the Internet that is rapidly gathering momentum driven by the advancements in sensor networks, mobile devices, wireless communications, networking and cloud technologies. Experts forecast that by the year 2020 there will be a total of 50 billion devices/things connected to the internet. This book is written as a textbook on Internet of Things for educational programs at colleges and universities, and also for IoT vendors and service providers who may be interested in offering a broader perspective of Internet of Things to accompany their own customer and developer training programs. The typical reader is expected to have completed a couple of courses in programming using traditional high-level languages at the college-level, and is either a senior or a beginning graduate student in one of the science, technology, engineering or mathematics (STEM) fields. Like our companion book on Cloud Computing, we have tried to write a comprehensive book that transfers knowledge through an immersive "hands on" approach, where the reader is provided the necessary guidance and knowledge to develop working code for real-world IoT applications. Additional support is available at the book's website: www.internet-of-things-book.com Organization The book is organized into 3 main parts, comprising of a total of 11 chapters. Part I covers the building blocks of Internet of Things (IoTs) and their characteristics. A taxonomy of IoT systems is proposed comprising of various IoT levels with increasing levels of complexity. Domain specific Internet of Things and their real-world applications are described. A generic design methodology for IoT is proposed. An IoT system management approach using NETCONF-YANG is described. Part II introduces the reader to the programming aspects of Internet of Things with a view towards rapid prototyping of complex IoT applications. We chose Python as the primary programming language for this book, and an introduction to Python is also included within the text to bring readers to a common level of expertise. We describe packages, frameworks and cloud services including the WAMP-AutoBahn, Xively cloud and Amazon Web Services which can be used for developing IoT systems. We chose the Raspberry Pi device for the examples in this book. Reference architectures for different levels of IoT applications are examined in detail. Case studies with complete source code for various IoT domains including home automation, smart environment, smart cities, logistics, retail, smart energy, smart agriculture, industrial control and smart health, are described. Part III introduces the reader to advanced topics on IoT including IoT data analytics and Tools for IoT. Case studies on collecting and analyzing data generated by Internet of Things in the cloud are described.

Delivers absolutely everything you will ever need to know to become a master Django programmer About This Book Gain a complete understanding of Django—the most popular, Python-based web framework in the world Gain the skills to successfully designing, developing, and deploying your app This book is packaged with fully described code so you can learn the fundamentals and the advanced topics to get a complete understanding of all of Django's core functions Who This Book Is For This book assumes you have a basic understanding of the Internet and programming. Experience with Python or Django would be an advantage, but is not necessary. It is ideal for beginner to intermediate programmers looking for a fast, secure, scalable, and maintainable alternative web development platform to those based on PHP, Java, and dotNET. What You Will Learn Use Django to access user-submitted form data, validate it, and work with it Get to know advanced URLconf tips and tricks Extend Django's template system with custom code Define models and use the database API to create, retrieve, update, and delete records Fully extend and customize the default implementation as per your project's needs Test and deploy your Django application Get to know more about Django's session, cache Framework, and middleware In Detail Mastering Django: Core is a completely revised and updated version of the original Django Book, written by Adrian Holovaty and Jacob Kaplan-Moss - the creators of Django. The

main goal of this book is to make you a Django expert. By reading this book, you'll learn the skills needed to develop powerful websites quickly, with code that is clean and easy to maintain. This book is also a programmer's manual that provides complete coverage of the current Long Term Support (LTS) version of Django. For developers creating applications for commercial and business critical deployments, Mastering Django: Core provides a complete, up-to-date resource for Django 1.8LTS with a stable code-base, security fixes and support out to 2018. Style and approach This comprehensive step-by-step practical guide offers a thorough understanding of all the web development concepts related to Django. In addition to explaining the features of Django, this book provides real-world experience on how these features fit together to build extraordinary apps.

The original, best-selling Django programmer's reference completely rewritten for Django 2 and 3.

If you want to learn how best to utilize commonly found patterns and learn best practices in developing applications with Django, this is the book for you. This book, like Django itself, is accessible to amateur and professional developers alike and assumes little in the way of prior experience. Although written for Python 3, the majority of the code in this book works in Python 2 or can be easily translated.

This book covers the latest release of MongoDB. You'll learn how to master various tasks related to the development and administration of a MongoDB database, along with best practices to optimize the workflow. The book also covers multiple financial and practical use cases that will enable you to use MongoDB for commercial data storage.

A beginner's guide that will help you get familiar with Django for web development. KEY FEATURES ? Learn to build websites with a strong blend of concepts and practical learning. ? Set up your public website with advanced functionalities from scratch. ? Explore Django architecture, components, navigation panel and templates. DESCRIPTION 'Building Websites with Django' book teaches readers to develop their high-quality, feature-rich website by learning Django and its various tools. You will learn the best techniques to develop a dynamic website, right from scratch. This book focuses not only on just creating a particular application but rather develops a strong understanding of theoretical concepts with rich examples. You will learn to troubleshoot errors, develop navigation panels and add advanced functionalities like deploying on heroku server. You will read about models, templates, different types of views. You will learn to create apps and learn how to integrate different apps. By the end of this book, You will create a project from scratch and will deploy it as a public website by yourself. WHAT YOU WILL LEARN ? Create a Django project from scratch and deploy them as a public website. ? Work with Django components such as Model, View, and Template. ? Interact with the database using Query Sets. ? Deploy your Django application for free on Heroku. ? Learn how to use Django's built-in authentication and authorization module effectively. WHO THIS BOOK IS FOR This book is for early entrepreneurs, beginners, software professionals, bloggers and hobbyists who want to create their online presence on their own without having any prior technical knowledge about web tools. TABLE OF CONTENTS 1. Introduction to Django 2. An Overview of the MTV Architecture 3. Understanding Django Settings 4. Django Admin Utility 5. Interacting with the Database using Query Sets 6. Enhancing your Project 7. Understanding Models 8. Django Views 9. Django Templates 10. URL and Regex 11. Forms in Django 12. Setting up a Project 13. The Account app 14. The Genre app 15. The Post app 16. Deploying the Website Build powerful web applications, quickly and cleanly, with the Django application framework.

Go beyond the basics of D3.js to create maintainable, modular, and testable charts and to package them into a library that can be distributed as open source software or kept for private use. This book will show you how to transform regular D3.js chart code into reusable and extendable modules. You know the basics of working with D3.js, but it's time to become a professional D3.js practitioner. This book is your launching pad to refactoring code, composing complex visualizations from small components, working as a team with other developers, and integrating charts with a Continuous Integration system. You'll begin by creating a production-ready chart using D3.js v5, ES2015, and a test-driven approach and then move on to using and extending Britecharts, the reusable charting library based on Reusable API patterns. Finally, you'll see how to use D3.js along with React to document and build your charts to compose a charting library you can release into the NPM repository. With Pro D3.js, you'll become an accomplished D3.js developer in no time. What You Will Learn Create v5 D3.js charts with ES2016 and unit tests Develop modular, testable and extensible code with the Reusable API pattern Work with and extend Britecharts, a reusable charting library created at Eventbrite Use Webpack and npm to create and publish a charting library from your own chart collections Write reference documentation and build a documentation homepage for your library. Who This Book Is For Data scientists, data visualization engineers, and frontend developers with a fundamental knowledge of D3.js and some experience with JavaScript, as well as data journalists and consultants.

Django, the Python-based Web development framework, is one of the hottest topics in Web development today. Its creator (and co-author of this book) Adrian Holovaty has built a compelling array of Web applications using Django, including <http://chicagocrime.org>. Django creator Adrian Holovaty and lead developer Jacob Kaplan-Moss have created this book as the definitive guide to the technology. Beginning with fundamentals such as installation and configuration, the book tackles sophisticated features of Django, such as outputting non-HTML content such as RSS feeds and PDFs, caching, and user management. Also includes a detailed reference to Django's many configuration options and commands.

Develop stunning web application projects with the Django framework About This Book Build six exciting projects and use them as a blueprint for your own work Extend Django's built-in models and forms to add common functionalities into your project, without reinventing the wheel Gain insights into the inner workings of Django to better leverage it Who This Book Is For If you are a Django web developer able to build basic web applications with the framework, then this book is for you. This book will help you gain a deeper understanding of the Django web framework by guiding you through the development of seven amazing web applications. What You Will Learn Create a blogging platform and allow users to share posts on different blogs Prioritise user-submitted content with an intelligent ranking algorithm based on multiple factors Create REST APIs to allow non-browser based usage of your web apps Customize the Django admin to quickly create a full-featured and rich content management system Use Elasticsearch with Django to create blazing fast e-commerce websites Translate your Django applications into multiple languages Dive deep into Django forms and how they work internally In Detail Django is a high-level web framework that eases the creation of complex, database-driven websites. It emphasizes on the reusability and pluggability of components, rapid development, and the principle of don't

repeat yourself. It lets you build high-performing, elegant web applications quickly. There are several Django tutorials available online, which take as many shortcuts as possible, but leave you wondering how you can adapt them to your own needs. This guide takes the opposite approach by demonstrating how to work around common problems and client requests, without skipping the important details. If you have built a few Django projects and are on the lookout for a guide to get you past the basics and to solve modern development tasks, this is your book. Seven unique projects will take you through the development process from scratch, leaving no stone unturned. In the first two projects, you will learn everything from adding ranking and voting capabilities to your App to building a multiuser blog platform with a unique twist. The third project tackles APIs with Django and walks us through building a Nagios-inspired infrastructure monitoring system. And that is just the start! The other projects deal with customizing the Django admin to create a CMS for your clients, translating your web applications to multiple languages, and using the Elasticsearch search server with Django to create a high performing e-commerce web site. The seventh chapter includes a surprise usage of Django, and we dive deep into the internals of Django to create something exciting! When you're done, you'll have consistent patterns and techniques that you can build on for many projects to come. Style and approach This easy-to-follow guide is full of examples that will take you through building six very different web applications with Django. The code is broken down into manageable bites and then thoroughly explained.

Completely updated for Django 3.2 Django for Beginners is a project-based introduction to Django, the popular Python-based web framework. Suitable for total beginners who have never built a website before as well as professional programmers looking for a fast-paced guide to modern web development and Django fundamentals. In the book you'll learn how to:

- * Build 5 websites from scratch, including a Blog and Newspaper
- * Deploy online using security best practices
- * Customize the look and feel of your sites
- * Write tests and run them for all your code
- * Integrate user authentication, email, and custom user models
- * Add permissions and authorizations to make your app more secure

If you're curious about Python-based web development, Django for Beginners is a best-practices guide to writing and deploying your own websites quickly.

Completely updated for Django 3.1 Django for Professionals takes your web development skills to the next level, teaching you how to build production-ready websites with Python and Django. Once you have learned the basics of Django there is a massive gap between building simple "toy apps" and what it takes to build a "production-ready" web application suitable for deployment to thousands or even millions of users. In the book you'll learn how to:

- * Build a Bookstore website from scratch
- * Use Docker and PostgreSQL locally to mimic production settings
- * Implement advanced user registration with email
- * Write comprehensive tests
- * Adopt advanced security and performance improvements
- * Add search and file/image uploads

If you want to take advantage of all that Django has to offer, Django for Professionals is a comprehensive best practices guide to building and deploying modern websites.

This book is designed for readers who learn by doing and employs many examples and screenshots to let the reader dig in and start coding. This book isn't designed to be a reference; instead it has a practical, example-driven approach that teaches you by following along with the examples in the chapters. When you have completed this book, you will fully understand how the template system works, how to extend it when you have specialized needs, and how to optimize the performance and usability of your content. This book is for web developers and template authors who want to fully understand and utilize the Django template system. The reader should have completed the introductory tutorials on the Django project's website and some experience with the framework will be very helpful. Basic knowledge of Python and HTML is assumed.

[Copyright: ea95f8da7dcab3c9c304f7007a2859e9](#)