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Django Project Blueprints

Develop stunning web application projects with the Django framework

Asad Jibran Ahmed

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PUBLISHING community experience distilled

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BIRMINGHAM - MUMBAI

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His experience with such big names has given him a keen insight into how to design performant, stable, and user friendly web applications, all the while using programming practices that make sure that the code base is maintainable for years.

I'd like to thank my parents for all the love and support they gave me when I was playing around with computers as a child. If it had not been for their encouragement in those early years, I might not be a programmer today, and this book might not exist.

Also, to all my siblings and friends, I'd like to say thank you for putting up with it all.

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Preface

Django is perhaps one of the most popular web development frameworks out there today. It is the framework that most Python developers reach for when they have any sizeable web application to develop.

With its proven track record of performance, scalability, and security, and its famous batteries-included approach, Django is used by some of the biggest names in the industry, including Instagram, Pinterest, and National Geographic.

This book is intended for people who have had a passing introduction to Django and a very basic idea of how to create a simple website with it. It will show you how to take your skills to the next level, developing applications as complex as e-commerce sites with lightning-fast search.

What this book covers

Chapter 1, Blueblog – A Blogging Platform, gets you started with Django and introduces the basic concepts of how to use the framework. It also introduces you to the development techniques used in the rest of the book.

Chapter 2, Discuss – A Hacker News Clone, walks you through creating a web application in the style of the popular Hacker News discussion forum. We look at advanced techniques to sort and rank the content of a web application based on user feedback, and then we look at spam prevention techniques.

Chapter 3, Djagios – a Nagios Clone in Django, covers the creation of a Nagios-like application using Django that can monitor and report on the status of remote server systems.

Chapter 4, A Car Rental App, shows you how to create a car rental application and customize the Django admin application to provide our users with a fully-featured Content Management System.

Chapter 5, Multilingual Movie DataBase, helps you create an IMDB-style web listing of movies, allowing user comments and reviews on the movies. The main focus of this chapter is allowing internationalized and localized versions of your web applications available in multiple languages.

Chapter 6, Daintree – An E-commerce site, shows you how to create an Amazon-like e-commerce website with lightning-fast search by utilizing the Elasticsearch search server software with Django.

Chapter 7, Form Mason – a Monkey of your own, helps you create a complicated and interesting web application that allows users to dynamically define web forms and then ask other people to respond to those forms, which is similar in nature to SurveyMonkey and other such sites.

Appendix, Development Environment Setup Details and Debugging Techniques, here we will look into the details of the setup, and I will explain each of the steps that we took. We will also see a technique for debugging Django applications.

What you need for this book

To create and run all the web applications that we will develop throughout the book, you will need working copies of the following software:

- The Python programming language
- pip: The package manager for installing Python packages
- virtualenv: A tool for creating isolated environments for Python packages

You can download the Python programming language for your operating system from <https://www.python.org/downloads/>. You will need Python 3 to follow the examples in this book.

You can find the instructions to install the pip package management tool at <https://pip.pypa.io/en/stable/installing/>.

You can install virtualenv by following the instructions at <https://virtualenv.pypa.io/en/latest/installation.html>.

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 six amazing web applications.

Conventions

In this book, you will find a number of text styles that distinguish between different kinds of information. Here are some examples of these styles and an explanation of their meaning.

Code words in text, database table names, folder names, filenames, file extensions, pathnames, dummy URLs, user input, and Twitter handles are shown as follows: "We can include other contexts through the use of the `include` directive."

A block of code is set as follows:

```
[default]
exten => s,1,Dial(Zap/1|30)
exten => s,2,VoiceMail(u100)
exten => s,102,VoiceMail(b100)
exten => i,1,VoiceMail(s0)
```


When we wish to draw your attention to a particular part of a code block, the relevant lines or items are set in bold:


```
[default]
exten => s,1,Dial(Zap/1|30)
exten => s,2,VoiceMail(u100)
exten => s,102,VoiceMail(b100)
exten => i,1,VoiceMail(s0)
```

Any command-line input or output is written as follows:

```
# cp /usr/src/asterisk-addons/configs/cdr_mysql.conf.sample
   /etc/asterisk/cdr_mysql.conf
```

New terms and **important words** are shown in bold. Words that you see on the screen, for example, in menus or dialog boxes, appear in the text like this: "Clicking the **Next** button moves you to the next screen."

[ Warnings or important notes appear in a box like this.]

[ Tips and tricks appear like this.]

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