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KEY=GUI - ZANDER LIVIA

TKINTER GUI APPLICATION DEVELOPMENT BLUEPRINTS, SECOND EDITION

BUILD NINE PROJECTS BY WORKING WITH WIDGETS, GEOMETRY MANAGEMENT, EVENT HANDLING, AND MORE, 2ND EDITION

Packt Publishing Ltd Geometry Management, Event Handling, and more Key Features A Practical, guide to learn the application of Python and GUI programming with tkinter Create multiple cross-platform real-world projects by integrating host of third party libraries and tools Learn to build beautiful and highly interactive user interfaces, targeting multiple devices. Book Description Tkinter is the built-in GUI package that comes with standard Python distributions. It is a cross-platform package, which means you build once and deploy everywhere. It is simple to use and intuitive in nature, making it suitable for programmers and non-programmers alike. This book will help you master the art of GUI programming. It delivers the bigger picture of GUI programming by building real-world, productive, and fun applications such as a text editor, drum machine, game of chess, audio player, drawing application, piano tutor, chat application, screen saver, port scanner, and much more. In every project, you will build on the skills acquired in the previous project and gain more expertise. You will learn to write multithreaded programs, network programs, database-driven programs, asyncio based programming and more. You will also get to know the modern best practices involved in writing GUI apps. With its rich source of sample code, you can build upon the knowledge gained with this book and use it in your own projects in the discipline of your choice. What you will learn -A Practical, guide to help you learn the application of Python and GUI programming with Tkinter - Create multiple, cross-platform, real-world projects by integrating a host of third-party libraries and tools - Learn to build beautiful and highly interactive user interfaces, targeting multiple devices. Who this book is for This book is for a beginner to intermediate-level Pythonists who want to build modern, cross-platform GUI applications with the amazingly powerful Tkinter. Prior knowledge of Tkinter is required.

TKINTER GUI APPLICATION DEVELOPMENT BLUEPRINTS - SECOND EDITION

Geometry Management, Event Handling, and more About This Book A Practical, guide to learn the application of Python and GUI programming with tkinter Create multiple cross-platform real-world projects by integrating host of third party libraries and tools Learn to build beautiful and highly interactive user interfaces, targeting multiple devices. Who This Book Is For This book is for a beginner to intermediate-level Pythonists who want to build modern, cross-platform GUI applications with the amazingly powerful Tkinter. Prior knowledge of Tkinter is required. What You Will Learn A Practical, guide to help you learn the application of Python and GUI programming with Tkinter Create multiple, cross-platform, real-world projects by integrating a host of third-party libraries and tools Learn to build beautiful and highly interactive user interfaces, targeting multiple devices. In Detail Tkinter is the built-in GUI package that comes with standard Python distributions. It is a cross-platform package, which means you build once and deploy everywhere. It is simple to use and intuitive in nature, making it suitable for programmers and non-programmers alike. This book will help you master the art of GUI programming. It delivers the bigger picture of GUI programming by building real-world, productive, and fun applications such as a text editor, drum machine, game of chess, audio player, drawing application, piano tutor, chat application, screen saver, port scanner, and much more. In every project, you will build on the skills acquired in the previous project and gain more expertise. You will learn to write multithreaded programs, network programs, database-driven programs, asyncio based programming and more. You will also get to know the modern best practices involved in writing GUI apps. With its rich source of sample code, you can build upon the knowledge gained with this book and use it in your own projects in the discipline of your choice. Style and approach An easy-to-follow guide, full of hands-on examples of real-world GUI programs. The first chapter is a must-read as it explains most of the things you need to get started with writing GUI programs with Tkinter. Each subsequent chapter is a stand-alone project that discusses some aspects of GUI programming in detail. These chapters can be read sequentially or randomly, depending on the reader's experience with Python. Downloading the example code for this book You can download the example code files ...

TKINTER GUI APPLICATION DEVELOPMENT BLUEPRINTS

Packt Publishing Ltd Master GUI programming in Tkinter as you design, implement, and deliver ten real-world applications from start to finish About This Book Conceptualize and build state-of-art GUI applications with Tkinter Tackle the complexity of just about any size GUI application with a structured and scalable approach A project-based, practical guide to get hands-on into Tkinter GUI development Who This Book Is For Software developers, scientists, researchers, engineers, students, or programming hobbyists with basic familiarity in Python will find this book interesting and informative. People familiar with basic programming constructs in other programming language can also catch up with some brief reading on Python. No GUI programming experience is expected. What You

Will Learn Get to know the basic concepts of GUI programming, such as Tkinter top-level widgets, geometry management, event handling, using callbacks, custom styling, and dialogs Create apps that can be scaled in size or complexity without breaking down the core Write your own GUI framework for maximum code reuse Build apps using both procedural and OOP styles, understanding the strengths and limitations of both styles Learn to structure and build large GUI applications based on Model-View-Controller (MVC) architecture Build multithreaded and database-driven apps Create apps that leverage resources from the network Learn basics of 2D and 3D animation in GUI applications Develop apps that can persist application data with object serialization and tools such as configparser In Detail Tkinter is the built-in GUI package that comes with standard Python distributions. It is a cross-platform package, which means you build once and deploy everywhere. It is simple to use and intuitive in nature, making it suitable for programmers and non-programmers alike. This book will help you master the art of GUI programming. It delivers the bigger picture of GUI programming by building real-world, productive, and fun applications such as a text editor, drum machine, game of chess, media player, drawing application, chat application, screen saver, port scanner, and many more. In every project, you will build on the skills acquired in the previous project and gain more expertise. You will learn to write multithreaded programs, network programs, database driven programs and more. You will also get to know the modern best practices involved in writing GUI apps. With its rich source of sample code, you can build upon the knowledge gained with this book and use it in your own projects in the discipline of your choice. Style and approach An easy-to-follow guide, full of hands-on examples of real-world GUI programs. The first chapter is a must read as it explains most of the things you need to get started with writing GUI programs with Tkinter. Each subsequent chapter is a stand-alone project that discusses some aspects of GUI programming in detail. These chapters can be read sequentially or randomly depending upon the readers experience with Python.

TKINTER GUI APPLICATION DEVELOPMENT COOKBOOK

A PRACTICAL SOLUTION TO YOUR GUI DEVELOPMENT PROBLEMS WITH PYTHON AND TKINTER

Packt Publishing Ltd Discover solutions to all your Tkinter and Python GUI development problems Key Features Integrate efficient Python GUI programming techniques with Tkinter Efficiently implement advanced MVC architectures in your Python GUI apps Solve all your problems related to Tkinter and Python GUI development Book Description As one of the more versatile programming languages, Python is well-known for its batteries-included philosophy, which includes a rich set of modules in its standard library; Tkinter is the library included for building desktop applications. Due to this, Tkinter is a common choice for rapid GUI development, and more complex applications can benefit from the full capabilities of this library. This book covers all of your Tkinter and Python GUI development problems and solutions. Tkinter GUI Application Development Cookbook starts with an overview of Tkinter classes and at the same time provides recipes for basic topics, such as layout patterns and event handling. Next, we cover how to develop common GUI patterns, such as entering and saving data, navigating through menus and dialogs, and performing long-running actions in the background. You can then make your apps leverage network resources effectively and perform graphical operations on a canvas and related tasks such as detecting collisions between items. Finally, this book covers using themed widgets, an extension of Tk widgets that have a more native look and feel. Finally, this book covers using the canvas and themed widgets. By the end of the book, you will have an in-depth knowledge of Tkinter classes, and will know how to use them to build efficient and rich GUI applications. What you will learn Add widgets and handle user events Lay out widgets within windows using frames and the different geometry managers Configure widgets so that they have a customized appearance and behavior Improve the navigation of your apps with menus and dialogs Apply object-oriented programming techniques in Tkinter applications Use threads to achieve responsiveness and update the GUI Explore the capabilities of the canvas widget and the types of items that can be added to it Extend Tkinter applications with the TTK (themed Tkinter) module Who this book is for This book is for Python developers who are familiar with the basics of the language syntax, data structures, and OOP. You do not need previous experience with Tkinter or other GUI development libraries.

PYTHON GUI PROGRAMMING COOKBOOK

Packt Publishing Ltd Over 80 object-oriented recipes to help you create mind-blowing GUIs in Python About This Book Use object-oriented programming to develop amazing GUIs in Python Create a working GUI project as a central resource for developing your Python GUIs Packed with easy-to-follow recipes to help you develop code using the latest released version of Python Who This Book Is For If you are a Python programmer with intermediate level knowledge of GUI programming and want to learn how to create beautiful, effective, and responsive GUIs using the freely available Python GUI frameworks, this book is for you. What You Will Learn Create amazing GUIs with Python's built-in Tkinter module Customize the GUIs by using layout managers to arrange the GUI widgets Advance to an object-oriented programming style using Python Develop beautiful charts using the free Matplotlib Python module Use threading in a networked environment to make the GUIs responsive Discover ways to connect the GUIs to a database Understand how unit tests can be created and internationalize the GUI Extend the GUIs with free Python frameworks using best practices In Detail Python is a multi-domain, interpreted programming language. It is a widely used general-purpose, high-level programming language. It is often used as a scripting language because of its forgiving syntax and compatibility with a wide variety of different eco-systems. Its flexible syntax enables developers to write short scripts while at the same time, they can use object-oriented concepts to develop very large projects. Python GUI Programming Cookbook follows a task-based approach to help you create beautiful and very effective GUIs with the least amount of code necessary. This book uses the simplest programming style, using the fewest lines of code to create a GUI in Python, and then advances to using object-oriented programming in later chapters. If you are new to object-oriented programming (OOP), this book will teach you how to take advantage of the OOP coding style in the context of creating GUIs written in Python. Throughout the book, you will develop an entire GUI application, building recipe upon recipe, connecting the GUI to a database. In the later chapters, you will explore additional Python GUI frameworks, using best practices. You will also learn how to use threading to ensure your GUI doesn't go unresponsive. By the end of the book, you will be an expert in Python GUI programming to develop a common set of GUI applications. Style and approach Every recipe in this programming cookbook solves a problem you might encounter in your programming career. At the same time, most of the recipes build on each other to create an entire, real-life GUI application.

TKINTER GUI PROGRAMMING BY EXAMPLE

LEARN TO CREATE MODERN GUIs USING TKINTER BY BUILDING REAL-WORLD PROJECTS IN PYTHON

Packt Publishing Ltd Leverage the power of Python and its de facto GUI framework to build highly interactive interfaces **Key Features** The fundamentals of Python and GUI programming with Tkinter. Create multiple cross-platform projects by integrating a host of third-party libraries and tools. Build beautiful and highly-interactive user interfaces that target multiple devices. **Book Description** Tkinter is a modular, cross-platform application development toolkit for Python. When developing GUI-rich applications, the most important choices are which programming language(s) and which GUI framework to use. Python and Tkinter prove to be a great combination. This book will get you familiar with Tkinter by having you create fun and interactive projects. These projects have varying degrees of complexity. We'll start with a simple project, where you'll learn the fundamentals of GUI programming and the basics of working with a Tkinter application. After getting the basics right, we'll move on to creating a project of slightly increased complexity, such as a highly customizable Python editor. In the next project, we'll crank up the complexity level to create an instant messaging app. Toward the end, we'll discuss various ways of packaging our applications so that they can be shared and installed on other machines without the user having to learn how to install and run Python programs. **What you will learn** Create a scrollable frame via the Canvas widget Use the pack geometry manager and Frame widget to control layout Learn to choose a data structure for a game Group Tkinter widgets, such as buttons, canvases, and labels Create a highly customizable Python editor Design and lay out a chat window **Who this book is for** This book is for beginners to GUI programming who haven't used Tkinter yet and are eager to start building great-looking and user-friendly GUIs. Prior knowledge of Python programming is expected.

LEARNING PYTHON APPLICATION DEVELOPMENT

Packt Publishing Ltd Take Python beyond scripting to build robust, reusable, and efficient applications **About This Book** Get to grips with Python techniques that address commonly encountered problems in general application development. Develop, package, and deploy efficient applications in a fun way. All-practical coverage of the major areas of application development, including best practices, exception handling, testing, refactoring, design patterns, performance, and GUI application development. **Who This Book Is For** Do you know the basics of Python and object oriented programming? Do you want to go an extra mile and learn techniques to make your Python application robust, extensible, and efficient? Then this book is for you. **What You Will Learn** Build a robust application by handling exceptions. Modularize, package, and release the source distribution. Document the code and implement coding standards. Create automated tests to catch bugs in the early development stage. Identify and re-factor badly written code to improve application life. Detect recurring problems in the code and apply design patterns. Improve code efficiency by identifying performance bottlenecks and fixing them. Develop simple GUI applications using Python. **In Detail** Python is one of the most widely used dynamic programming languages, supported by a rich set of libraries and frameworks that enable rapid development. But fast paced development often comes with its own baggage that could bring down the quality, performance, and extensibility of an application. This book will show you ways to handle such problems and write better Python applications. From the basics of simple command-line applications, develop your skills all the way to designing efficient and advanced Python apps. Guided by a light-hearted fantasy learning theme, overcome the real-world problems of complex Python development with practical solutions. Beginning with a focus on robustness, packaging, and releasing application code, you'll move on to focus on improving application lifetime by making code extensible, reusable, and readable. Get to grips with Python refactoring, design patterns and best practices. Techniques to identify the bottlenecks and improve performance are covered in a series of chapters devoted to performance, before closing with a look at developing Python GUIs. **Style and approach** The book uses a fantasy game theme as a medium to explain various topics. Specific aspects of application development are explained in different chapters. In each chapter the reader is presented with an interesting problem which is then tackled using hands-on examples with easy-to-follow instructions.

PYTHON GUI PROGRAMMING WITH TKINTER

DEVELOP RESPONSIVE AND POWERFUL GUI APPLICATIONS WITH TKINTER

Packt Publishing Ltd Find out how to create visually stunning and feature-rich applications by empowering Python's built-in Tkinter GUI toolkit **Key Features** Explore Tkinter's powerful features to easily design and customize your GUI application Learn the basics of 2D and 3D animation in GUI applications. Learn to integrate stunning Data Visualizations using Tkinter Canvas and Matplotlib. **Book Description** Tkinter is a lightweight, portable, and easy-to-use graphical toolkit available in the Python Standard Library, widely used to build Python GUIs due to its simplicity and availability. This book teaches you to design and build graphical user interfaces that are functional, appealing, and user-friendly using the powerful combination of Python and Tkinter. After being introduced to Tkinter, you will be guided step-by-step through the application development process. Over the course of the book, your application will evolve from a simple data-entry form to a complex data management and visualization tool while maintaining a clean and robust design. In addition to building the GUI, you'll learn how to connect to external databases and network resources, test your code to avoid errors, and maximize performance using asynchronous programming. You'll make the most of Tkinter's cross-platform availability by learning how to maintain compatibility, mimic platform-native look and feel, and build executables for deployment across popular computing platforms. By the end of this book, you will have the skills and confidence to design and build powerful high-end GUI applications to solve real-world problems. **What you will learn** Implement the tools provided by Tkinter to design beautiful GUIs Discover cross-platform development through minor customizations in your existing application Visualize graphs in real time as data comes in using Tkinter's animation capabilities Use PostgreSQL authentication to ensure data security for your application Write unit tests to avoid regressions when updating code **Who this book is for** This book will appeal to developers and programmers who would like to build GUI-based applications. Knowledge of Python is a prerequisite.

TKINTER GUI APPLICATION DEVELOPMENT HOTSHOT

DEVELOP EXCITING AND ENGAGING GUI APPLICATIONS IN PYTHON AND TKINTER BY WORKING ON 10 REAL-WORLD APPLICATIONS

Practical, real-world example projects. Start with the topics that grab your attention or work through each project in sequence. If you have just started with GUI programming, this book is ideal for you. This book is also great if you are an experienced software developer, scientist, researcher, engineer, student, or hobbyist.

PYTHON GUI PROGRAMMING - A COMPLETE REFERENCE GUIDE

DEVELOP RESPONSIVE AND POWERFUL GUI APPLICATIONS WITH PYQT AND TKINTER

Packt Publishing Ltd Explore Python's GUI frameworks and create visually stunning and feature-rich applications **Key Features**Integrate stunning data visualizations using Tkinter Canvas and MatplotlibUnderstand the basics of 2D and 3D animation in GUI applicationsExplore PyQt's powerful features to easily design and customize your GUI applications**Book Description** A responsive graphical user interface (GUI) helps you interact with your application, improves user experience, and enhances the efficiency of your applications. With Python, you'll have access to elaborate GUI frameworks that you can use to build interactive GUIs that stand apart from the rest. This Learning Path begins by introducing you to Tkinter and PyQt, before guiding you through the application development process. As you expand your GUI by adding more widgets, you'll work with networks, databases, and graphical libraries that enhance its functionality. You'll also learn how to connect to external databases and network resources, test your code, and maximize performance using asynchronous programming. In later chapters, you'll understand how to use the cross-platform features of Tkinter and Qt5 to maintain compatibility across platforms. You'll be able to mimic the platform-native look and feel, and build executables for deployment across popular computing platforms. By the end of this Learning Path, you'll have the skills and confidence to design and build high-end GUI applications that can solve real-world problems. This Learning Path includes content from the following Packt products: Python GUI Programming with Tkinter by Alan D. MooreQt5 Python GUI Programming Cookbook by B. M. Harwani**What you will learn**Visualize graphs in real time with Tkinter's animation capabilitiesUse PostgreSQL authentication to ensure data security for your applicationWrite unit tests to avoid regression when updating codeHandle different signals generated on mouse clicks using QSpinBox and slidersEmploy network concepts, internet browsing, and Google Maps in UIUse graphics rendering to implement animations in your GUI**Who this book is for** If you're an intermediate Python programmer looking to enhance your coding skills by writing powerful GUIs in Python using PyQt and Tkinter, this is an ideal Learning Path for you. A strong understanding of the Python language is a must to grasp the concepts explained in this book.

PYTHON GUI PROGRAMMING COOKBOOK

DEVELOP FUNCTIONAL AND RESPONSIVE USER INTERFACES WITH TKINTER AND PYQT5, 3RD EDITION

Packt Publishing Ltd Over 90 recipes to help you develop widgets, forms, layouts, charts, and much more using the latest features of Python 3 **Key Features** Use object-oriented programming to develop impressive GUIs in Python Create interesting charts to visually represent data using Matplotlib Develop GUIs with the latest versions of tkinter, PyQt5, and wxPython frameworks **Book Description** Python is a multi-domain, interpreted programming language that is easy to learn and implement. With its wide support for frameworks to develop GUIs, you can build interactive and beautiful GUI-based applications easily using Python. This third edition of Python GUI Programming Cookbook follows a task-based approach to help you create effective GUIs with the smallest amount of code. Every recipe in this book builds upon the last to create an entire, real-life GUI application. These recipes also help you solve problems that you might encounter while developing GUIs. This book mainly focuses on using Python's built-in tkinter GUI framework. You'll learn how to create GUIs in Python using simple programming styles and object-oriented programming (OOP). As you add more widgets and expand your GUI, you will learn how to connect to networks, databases, and graphical libraries that greatly enhance the functionality of your GUI. You'll also learn how to use threading to ensure that your GUI doesn't become unresponsive. Toward the end, you'll learn about the versatile PyQt GUI framework, which comes along with its own visual editor that allows you to design GUIs using drag and drop features. By the end of the book, you'll be an expert in designing Python GUIs and be able to develop a variety of GUI applications with ease. **What you will learn** Create amazing GUIs with Python's built-in tkinter module Customize GUIs using layout managers to arrange GUI widgets Advance from the typical waterfall coding style to an OOP style using Python Develop beautiful charts using the free Matplotlib Python module Use threading in a networked environment to make GUIs responsive Discover ways to connect GUIs to a MySQL database Understand how unit tests can be created and internationalize GUI Delve into the world of GUI creation using PyQt5 **Who this book is for** If you're a programmer or developer looking to enhance your Python skills by writing powerful GUI applications, this book is for you. Familiarity with the Python programming language is necessary to get the most out of the book.

CREATE GUI APPLICATIONS WITH PYTHON & QT5 (PYSIDE2 EDITION)

THE HANDS-ON GUIDE TO MAKING APPS WITH PYTHON

Martin Fitzpatrick Building desktop applications doesn't have to be difficult. Using Python & Qt5 you can create fully functional desktop apps in minutes. This is the 4th Edition of Create GUI Applications, updated for 2020 & PySide2 Starting from the very basics, this book takes you on a tour of the key features of PySide you can use to build real-life applications. Learn the fundamental building blocks of PySide applications — Widgets, Layouts & Signals and learn how PySide uses the event loop to handle and respond to user input. Design beautiful UIs with Qt Designer and customize the look and feel of your applications with Qt Style Sheets and custom widgets. Use Qt's MVC-like ModelViews framework to connect data sources to your widgets, including SQL databases, numpy and pandas data

tables, to build-data driven application. Visualize data using matplotlib & PyQtGraph and connect with external data sources to build live dashboards. Learn how to use threads and processes to manage long-running tasks and communicate with external services. Parse data and visualize the output in logs and progress bars. The book includes usability and architectural tips to help you build maintainable and usable PySide2 applications from the start. Finally, once your application is ready to be released, discover how to package it up into professional-quality installers, ready to ship. The book includes - 665 pages of hands-on PySide2 exercises - 211 code examples to experiment with - Includes 4 example apps - Compatible with Python 3.4+ - Code free to reuse in your own projects

TKINTER GUI APPLICATION DEVELOPMENT COOKBOOK

Packt Publishing Discover solutions to all your Tkinter and Python GUI development problems Key Features Integrate efficient Python GUI programming techniques with Tkinter Efficiently implement advanced MVC architectures in your Python GUI apps Solve all your problems related to Tkinter and Python GUI development Book Description As one of the more versatile programming languages, Python is well-known for its batteries-included philosophy, which includes a rich set of modules in its standard library; Tkinter is the library included for building desktop applications. Due to this, Tkinter is a common choice for rapid GUI development, and more complex applications can benefit from the full capabilities of this library. This book covers all of your Tkinter and Python GUI development problems and solutions. Tkinter GUI Application Development Cookbook starts with an overview of Tkinter classes and at the same time provides recipes for basic topics, such as layout patterns and event handling. Next, we cover how to develop common GUI patterns, such as entering and saving data, navigating through menus and dialogs, and performing long-running actions in the background. You can then make your apps leverage network resources effectively and perform graphical operations on a canvas and related tasks such as detecting collisions between items. Finally, this book covers using themed widgets, an extension of Tk widgets that have a more native look and feel. Finally, this book covers using the canvas and themed widgets. By the end of the book, you will have an in-depth knowledge of Tkinter classes, and will know how to use them to build efficient and rich GUI applications. What you will learn Add widgets and handle user events Lay out widgets within windows using frames and the different geometry managers Configure widgets so that they have a customized appearance and behavior Improve the navigation of your apps with menus and dialogs Apply object-oriented programming techniques in Tkinter applications Use threads to achieve responsiveness and update the GUI Explore the capabilities of the canvas widget and the types of items that can be added to it Extend Tkinter applications with the TTK (themed Tkinter) module Who this book is for This book is for Python developers who are familiar with the basics of the language syntax, data structures, and OOP. You do not need previous experience with Tkinter or other GUI development libraries.

PYTHON GAME PROGRAMMING BY EXAMPLE

Packt Publishing Ltd A pragmatic guide for developing your own games with Python About This Book Strengthen your fundamentals of game programming with Python language Seven hands-on games to create 2D and 3D games rapidly from scratch Illustrative guide to explore the different GUI libraries for building your games Who This Book Is For If you have ever wanted to create casual games in Python and you would like to explore various GUI technologies that this language offers, this is the book for you. This title is intended for beginners to Python with little or no knowledge of game development, and it covers step by step how to build seven different games, from the well-known Space Invaders to a classical 3D platformer. What You Will Learn Take advantage of Python's clean syntax to build games quickly Discover distinct frameworks for developing graphical applications Implement non-player characters (NPCs) with autonomous and seemingly intelligent behaviors Design and code some popular games like Pong and tower defense Compose maps and levels for your sprite-based games in an easy manner Modularize and apply object-oriented principles during the design of your games Exploit libraries like Chimpunk2D, cocos2d, and Tkinter Create natural user interfaces (NUIs), using a camera and computer vision algorithms to interpret the player's real-world actions In Detail With a growing interest in learning to program, game development is an appealing topic for getting started with coding. From geometry to basic Artificial Intelligence algorithms, there are plenty of concepts that can be applied in almost every game. Python is a widely used general-purpose, high-level programming language. It provides constructs intended to enable clear programs on both a small and large scale. It is the third most popular language whose grammatical syntax is not predominantly based on C. Python is also very easy to code and is also highly flexible, which is exactly what is required for game development. The user-friendliness of this language allows beginners to code games without too much effort or training. Python also works with very little code and in most cases uses the "use cases" approach, reserving lengthy explicit coding for outliers and exceptions, making game development an achievable feat. Python Game Programming by Example enables readers to develop cool and popular games in Python without having in-depth programming knowledge of Python. The book includes seven hands-on projects developed with several well-known Python packages, as well as a comprehensive explanation about the theory and design of each game. It will teach readers about the techniques of game design and coding of some popular games like Pong and tower defense. Thereafter, it will allow readers to add levels of complexities to make the games more fun and realistic using 3D. At the end of the book, you will have added several GUI libraries like Chimpunk2D, cocos2d, and Tkinter in your tool belt, as well as a handful of recipes and algorithms for developing games with Python. Style and approach This book is an example-based guide that will teach you to build games using Python. This book follows a step-by-step approach as it is aimed at beginners who would like to get started with basic game development. By the end of this book you will be competent game developers with good knowledge of programming in Python.

PYTHON FOR DESKTOP APPLICATIONS

HOW TO DEVELOP, PACK AND DELIVER PYTHON APPLICATIONS WITH TKINTER AND KIVY

TRAN DUC LOI Chapter 1, Introduction shows you some fundamental concepts of Python such as pip, wheel, virtual environment, GIL, CLI and GUI, which tools we will use, how to set them up. Chapter 2, Create a File Downloader with TKInter introduces how to develop a Python file downloader application with simple GUI using TKInter library. This chapter also guides you how to pack your application using PyInstaller and make a setup using NSIS. Chapter 3, Create a Music Player with Kivy walks through how make a music player

with Kivy. We will start with a very simple Kivy application then eventually build a more complex one. We also pack our music player up using PyInstaller. Chapter 4, Debugging shows you how to debug your applications if something wrong. Useful tips and handy DependencyWalker debug tool guide. In this chapter, you will also be introduced to cx_Freeze to build/freeze a wx_Python application.

PYTHON IN A NUTSHELL

A DESKTOP QUICK REFERENCE

"O'Reilly Media, Inc." This book offers Python programmers one place to look when they need help remembering or deciphering the syntax of this open source language and its many powerful but scantily documented modules. This comprehensive reference guide makes it easy to look up the most frequently needed information--not just about the Python language itself, but also the most frequently used parts of the standard library and the most important third-party extensions. Ask any Python aficionado and you'll hear that Python programmers have it all: an elegant object-oriented language with readable and maintainable syntax, that allows for easy integration with components in C, C++, Java, or C#, and an enormous collection of pre-coded standard library and third-party extension modules. Moreover, Python is easy to learn, yet powerful enough to take on the most ambitious programming challenges. But what Python programmers used to lack is a concise and clear reference resource, with the appropriate measure of guidance in how best to use Python's great power. Python in a Nutshell fills this need. Python in a Nutshell, Second Edition covers more than the language itself; it also deals with the most frequently used parts of the standard library, and the most popular and important third party extensions. Revised and expanded for Python 2.5, this book now contains the gory details of Python's new subprocess module and breaking news about Microsoft's new IronPython project. Our "Nutshell" format fits Python perfectly by presenting the highlights of the most important modules and functions in its standard library, which cover over 90% of your practical programming needs. This book includes: A fast-paced tutorial on the syntax of the Python language An explanation of object-oriented programming in Python Coverage of iterators, generators, exceptions, modules, packages, strings, and regular expressions A quick reference for Python's built-in types and functions and key modules Reference material on important third-party extensions, such as Numeric and Tkinter Information about extending and embedding Python Python in a Nutshell provides a solid, no-nonsense quick reference to information that programmers rely on the most. This book will immediately earn its place in any Python programmer's library. Praise for the First Edition: "In a nutshell, Python in a Nutshell serves one primary goal: to act as an immediately accessible goal for the Python language. True, you can get most of the same core information that is presented within the covers of this volume online, but this will invariably be broken into multiple files, and in all likelihood lacking the examples or the exact syntax description necessary to truly understand a command." -- Richard Cobbett, Linux Format "O'Reilly has several good books, of which Python in a Nutshell by Alex Martelli is probably the best for giving you some idea of what Python is about and how to do useful things with it." -- Jerry Pournelle, Byte Magazine

ADVANCE CORE PYTHON PROGRAMMING

BEGIN YOUR JOURNEY TO MASTER THE WORLD OF PYTHON (ENGLISH EDITION)

BPB Publications Mastering Advanced Python Programming KEY FEATURES ● In-depth coverage on fundamentals of functions, recursion, classes, inheritance, and files. ● Mastery of advanced topics - Database connectivity, Errors and Exception, Testing and Debugging, threads, Data visualization, and Data analysis. ● In-depth coverage of advanced concepts such as data structures, and algorithms. ● Simplifies GUI and Widgets. ● Learn to connect GUI with MySQL to create a complete working application. ● Introduction to Flask. ● Thorough, detailed, and complete coverage of all topics along with ample coding examples and illustrations. DESCRIPTION Advance Core Python Programming is designed for Programmers who have a good understanding of Python basics and are ready to take the next steps. For entry-level Python programmers willing to dive deeper into programming, this book provides a path that will help them to add innovative features to their applications. This book starts by introducing you to the concept of Functions and Recursion and then moves on to higher levels of introducing you to OOP concepts, Files, integrating Python with database, threading, errors, exceptions, testing, debugging, data visualization, data analysis, GUI, data structures and algorithms. All these topics are the need of the hour and this book simplifies all these critical and essential concepts of Python for you. Knowledge of these topics will ease the functioning of your envisioned application. Throughout the book, you will have access to several coding examples which will help you to understand the real practical application of advanced Python concepts and you will be able to work on any kind of Python project with confidence. WHAT YOU WILL LEARN ● Learn advanced Python topics in simple language. ● Learn how to code in easy-to-follow steps. ● Learn to create your own classes and functions. ● Learn to work with Files. ● Learn to configure MySQL and make Python programs interact with the MySQL database. ● Get to know different types of errors, exceptions, and ways to test, debug and rectify them. ● Learn how to use Python for Data Visualization and Data Analysis. ● Learn to Create GUI features and add Widgets. ● Learn about data structures and algorithms. ● Learn to create and develop stack, queues, trees, and linked lists. ● Explore Flask, its features, and how to use it to build web applications. ● Learn to work on complex code by following simple step-by-step instructions. ● Prepare for theory and practical exams related to advanced Python Concepts. WHO THIS BOOK IS FOR This book is highly appealing to all tech-savvy students, programming enthusiasts, IT graduates, and computer science professionals who want to build strong proficiency in building Python applications. Prior understanding of Python basic coding concepts like variables, expressions, and control structures is required to begin with this book. You can also read Basic Core Python Programming to develop strong fundamentals before you start with this book. TABLE OF CONTENTS 1. Functions and Recursion 2. Classes, Objects, and Inheritance 3. Files 4. MySQL for Python 5. Python Threads 6. Errors, Exceptions, Testing, and Debugging 7. Data Visualization and Data Analysis 8. Creating the GUI form and Adding Widgets 9. MySQL and Python Graphical User Interface 10. Stack, Queue, and Deque 11. Linked List 12. Trees 13. Searching and Sorting 14. Getting Started with Flask

CREATE GUI APPLICATIONS WITH PYTHON & QT6 (PYSIDE6 EDITION)

Martin Fitzpatrick Building desktop applications doesn't have to be difficult. Using Python & Qt5 you can create fully functional desktop apps in minutes. This is the 5th Edition of Create GUI Applications, updated for 2021 & PySide6 Starting from the very basics, this book

takes you on a tour of the key features of PySide6 you can use to build real-life applications. Learn the fundamental building blocks of PySide6 applications — Widgets, Layouts & Signals and learn how PySide uses the event loop to handle and respond to user input. Design beautiful UIs with Qt Designer and customize the look and feel of your applications with Qt Style Sheets and custom widgets. Use Qt's MVC-like ModelViews framework to connect data sources to your widgets, including SQL databases, numpy and pandas data tables, to build-data driven application. Visualize data using matplotlib & PyQtGraph and connect with external data sources to build live dashboards. Learn how to use threads and processes to manage long-running tasks and communicate with external services. Parse data and visualize the output in logs and progress bars. The book includes usability and architectural tips to help you build maintainable and usable PySide6 applications from the start. - 665 pages of hands-on PySide6 exercises - 211 code examples to experiment with - Includes 4 example apps - Compatible with Python 3.6+ - Code free to reuse in your own projects

PYTHON PROGRAMMING BLUEPRINTS

BUILD NINE PROJECTS BY LEVERAGING POWERFUL FRAMEWORKS SUCH AS FLASK, NAMEKO, AND DJANGO

Packt Publishing Ltd How to build useful, real-world applications in the Python programming language Key Features Deliver scalable and high-performing applications in Python. Delve into the great ecosystem of Python frameworks and libraries through projects that you will build with this book. This comprehensive guide will help you demonstrate the power of Python by building practical projects. Book Description Python is a very powerful, high-level, object-oriented programming language. It's known for its simplicity and huge community support. Python Programming Blueprints will help you build useful, real-world applications using Python. In this book, we will cover some of the most common tasks that Python developers face on a daily basis, including performance optimization and making web applications more secure. We will familiarize ourselves with the associated software stack and master asynchronous features in Python. We will build a weather application using command-line parsing. We will then move on to create a Spotify remote control where we'll use OAuth and the Spotify Web API. The next project will cover reactive extensions by teaching you how to cast votes on Twitter the Python way. We will also focus on web development by using the famous Django framework to create an online game store. We will then create a web-based messenger using the new Nameko microservice framework. We will cover topics like authenticating users and, storing messages in Redis. By the end of the book, you will have gained hands-on experience in coding with Python. What you will learn Learn object-oriented and functional programming concepts while developing projects The dos and don'ts of storing passwords in a database Develop a fully functional website using the popular Django framework Use the Beautiful Soup library to perform web scrapping Get started with cloud computing by building microservice and serverless applications in AWS Develop scalable and cohesive microservices using the Nameko framework Create service dependencies for Redis and PostgreSQL Who this book is for This book is for software developers who are familiar with Python and want to gain hands-on experience with web and software development projects. A basic knowledge of Python programming is required.

PYTHON GUI PROGRAMMING WITH TKINTER

DESIGN AND BUILD FUNCTIONAL AND USER-FRIENDLY GUI APPLICATIONS

Packt Publishing Ltd Transform your evolving user requirements into feature-rich Tkinter applications Key Features Extensively revised with new content on RESTful networking, classes in Tkinter, and the Notebook widget Take advantage of Tkinter's lightweight, portable, and easy-to-use features Build better-organized code and learn to manage an evolving codebase Book Description Tkinter is widely used to build GUIs in Python due to its simplicity. In this book, you'll discover Tkinter's strengths and overcome its challenges as you learn to develop fully featured GUI applications. Python GUI Programming with Tkinter, Second Edition, will not only provide you with a working knowledge of the Tkinter GUI library, but also a valuable set of skills that will enable you to plan, implement, and maintain larger applications. You'll build a full-blown data entry application from scratch, learning how to grow and improve your code in response to continually changing user and business needs. You'll develop a practical understanding of tools and techniques used to manage this evolving codebase and go beyond the default Tkinter widget capabilities. You'll implement version control and unit testing, separation of concerns through the MVC design pattern, and object-oriented programming to organize your code more cleanly. You'll also gain experience with technologies often used in workplace applications, such as SQL databases, network services, and data visualization libraries. Finally, you'll package your application for wider distribution and tackle the challenge of maintaining cross-platform compatibility. What you will learn Produce well-organized, functional, and responsive GUI applications Extend the functionality of existing widgets using classes and OOP Plan wisely for the expansion of your app using MVC and version control Make sure your app works as intended through widget validation and unit testing Use tools and processes to analyze and respond to user requests Become familiar with technologies used in workplace applications, including SQL, HTTP, Matplotlib, threading, and CSV Use PostgreSQL authentication to ensure data security for your application Who this book is for This book is for programmers who understand the syntax of Python, but do not yet have the skills, techniques, and knowledge to design and implement a complete software application. A fair grasp of basic Python syntax is required.

INTRODUCTION TO COMPUTING USING PYTHON

AN APPLICATION DEVELOPMENT FOCUS

John Wiley & Sons Perkovic's Introduction to Computing Using Python: An Application Development Focus, 2nd Edition is more than just an introduction to programming. It is an inclusive introduction to Computer Science that takes the pedagogical approach of "the right tool for the job at the right moment," and focuses on application development. The approach is hands-on and problem-oriented, with practice problems and solutions appearing throughout the text. The text is imperative-first, but does not shy away from discussing objects early where appropriate. Discussions of user-defined classes and Object-Oriented Programming appear later in the text, when students have more background and concepts can be motivated. Chapters include an introduction to problem solving techniques and classical algorithms, problem-solving and programming and ways to apply core skills to application development. This

edition also includes examples and practice problems provided within a greater variety of domains. It also includes case studies integrated into additional chapters, providing students with real life applications using the concepts and tools covered in the chapters.

PYTHON AND TKINTER PROGRAMMING

Manning Publications This book includes full documentation for Tkinter, and also offers extensive examples for many real-world Python/Tkinter applications that will give programmers a quick start on their own projects.

THE HITCHHIKER'S GUIDE TO PYTHON

BEST PRACTICES FOR DEVELOPMENT

"O'Reilly Media, Inc." *The Hitchhiker's Guide to Python* takes the journeyman Pythonista to true expertise. More than any other language, Python was created with the philosophy of simplicity and parsimony. Now 25 years old, Python has become the primary or secondary language (after SQL) for many business users. With popularity comes diversity—and possibly dilution. This guide, collaboratively written by over a hundred members of the Python community, describes best practices currently used by package and application developers. Unlike other books for this audience, *The Hitchhiker's Guide* is light on reusable code and heavier on design philosophy, directing the reader to excellent sources that already exist.

PYTHON DATA SCIENCE HANDBOOK

ESSENTIAL TOOLS FOR WORKING WITH DATA

"O'Reilly Media, Inc." For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the *Python Data Science Handbook* do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

PYTHON GEOSPATIAL DEVELOPMENT ESSENTIALS

Packt Publishing Ltd This book provides you with the resources to successfully develop your own GIS application in Python. The book begins by walking you through the loading and saving of data structures before you start to build the look and feel of your application and create its interactive map window. You'll then move on to managing, editing, and analyzing spatial data from within the application and finish with instructions for packaging the application for distribution. By the end of the book, you should be able to use your GIS application as a template for further development, with the potential to expand and customize it to suit your needs.

PYTHON PROGRAMMING FOR ARDUINO

Packt Publishing Ltd This is the book for you if you are a student, hobbyist, developer, or designer with little or no programming and hardware prototyping experience, and you want to develop IoT applications. If you are a software developer or a hardware designer and want to create connected devices applications, then this book will help you get started.

INTRODUCTION TO PYTHON PROGRAMMING FOR BUSINESS AND SOCIAL SCIENCE APPLICATIONS

SAGE Publications Would you like to gather big datasets, analyze them, and visualize the results, all in one program? If this describes you, then *Introduction to Python Programming for Business and Social Science Applications* is the book for you. Authors Frederick Kaefer and Paul Kaefer walk you through each step of the Python package installation and analysis process, with frequent exercises throughout so you can immediately try out the functions you've learned. Written in straightforward language for those with no programming background, this book will teach you how to use Python for your research and data analysis. Instead of teaching you the principles and practices of programming as a whole, this application-oriented text focuses on only what you need to know to research and answer social science questions. The text features two types of examples, one set from the General Social Survey and one set from a large taxi trip dataset from a major metropolitan area, to help readers understand the possibilities of working with Python. Chapters on installing and working within a programming environment, basic skills, and necessary commands will get you up and running quickly, while chapters on programming logic, data input and output, and data frames help you establish the basic framework for conducting analyses. Further chapters on web scraping, statistical analysis, machine learning, and data visualization help you apply your skills to your research. More advanced information on developing graphical user interfaces (GUIs) help you create functional data products using Python to inform general users of data who don't work within Python. First there was IBM® SPSS®, then there was R, and now there's Python. Statistical software is getting more aggressive - let authors Frederick Kaefer and Paul Kaefer help you tame it with *Introduction to Python Programming for Business and Social Science Applications*.

PYTHON BASICS

A PRACTICAL INTRODUCTION TO PYTHON 3

Real Python (Realpython.Com) *Make the Leap From Beginner to Intermediate in Python...* Python Basics: A Practical Introduction to

Python 3 Your Complete Python Curriculum-With Exercises, Interactive Quizzes, and Sample Projects What should you learn about Python in the beginning to get a strong foundation? With Python Basics, you'll not only cover the core concepts you really need to know, but you'll also learn them in the most efficient order with the help of practical exercises and interactive quizzes. You'll know enough to be dangerous with Python, fast! Who Should Read This Book If you're new to Python, you'll get a practical, step-by-step roadmap on developing your foundational skills. You'll be introduced to each concept and language feature in a logical order. Every step in this curriculum is explained and illustrated with short, clear code samples. Our goal with this book is to educate, not to impress or intimidate. If you're familiar with some basic programming concepts, you'll get a clear and well-tested introduction to Python. This is a practical introduction to Python that jumps right into the meat and potatoes without sacrificing substance. If you have prior experience with languages like VBA, PowerShell, R, Perl, C, C++, C#, Java, or Swift the numerous exercises within each chapter will fast-track your progress. If you're a seasoned developer, you'll get a Python 3 crash course that brings you up to speed with modern Python programming. Mix and match the chapters that interest you the most and use the interactive quizzes and review exercises to check your learning progress as you go along. If you're a self-starter completely new to coding, you'll get practical and motivating examples. You'll begin by installing Python and setting up a coding environment on your computer from scratch, and then continue from there. We'll get you coding right away so that you become competent and knowledgeable enough to solve real-world problems, fast. Develop a passion for programming by solving interesting problems with Python every day! If you're looking to break into a coding or data-science career, you'll pick up the practical foundations with this book. We won't just dump a boat load of theoretical information on you so you can "sink or swim"-instead you'll learn from hands-on, practical examples one step at a time. Each concept is broken down for you so you'll always know what you can do with it in practical terms. If you're interested in teaching others "how to Python," this will be your guidebook. If you're looking to stoke the coding flame in your coworkers, kids, or relatives-use our material to teach them. All the sequencing has been done for you so you'll always know what to cover next and how to explain it. What Python Developers Say About The Book: "Go forth and learn this amazing language using this great book." - Michael Kennedy, Talk Python "The wording is casual, easy to understand, and makes the information flow well." - Thomas Wong, Pythonista "I floundered for a long time trying to teach myself. I slogged through dozens of incomplete online tutorials. I snoozed through hours of boring screencasts. I gave up on countless cruffy books from big-time publishers. And then I found Real Python. The easy-to-follow, step-by-step instructions break the big concepts down into bite-sized chunks written in plain English. The authors never forget their audience and are consistently thorough and detailed in their explanations. I'm up and running now, but I constantly refer to the material for guidance." - Jared Nielsen, Pythonista

GO PROGRAMMING BLUEPRINTS

Packt Publishing Ltd Build real-world, production-ready solutions in Go using cutting-edge technology and techniques About This Book Get up to date with Go and write code capable of delivering massive world-class scale performance and availability Learn to apply the nuances of the Go language, and get to know the open source community that surrounds it to implement a wide range of start-up quality projects Write interesting and clever but simple code, and learn skills and techniques that are directly transferrable to your own projects Who This Book Is For If you are familiar with Go and are want to put your knowledge to work, then this is the book for you. Go programming knowledge is a must. What You Will Learn Build quirky and fun projects from scratch while exploring patterns, practices, and techniques, as well as a range of different technologies Create websites and data services capable of massive scale using Go's net/http package, exploring RESTful patterns as well as low-latency WebSocket APIs Interact with a variety of remote web services to consume capabilities ranging from authentication and authorization to a fully functioning thesaurus Develop high-quality command-line tools that utilize the powerful shell capabilities and perform well using Go's in-built concurrency mechanisms Build microservices for larger organizations using the Go Kit library Implement a modern document database as well as high-throughput messaging queue technology to put together an architecture that is truly ready to scale Write concurrent programs and gracefully manage the execution of them and communication by smartly using channels Get a feel for app deployment using Docker and Google App Engine In Detail Go is the language of the Internet age, and the latest version of Go comes with major architectural changes. Implementation of the language, runtime, and libraries has changed significantly. The compiler and runtime are now written entirely in Go. The garbage collector is now concurrent and provides dramatically lower pause times by running in parallel with other Go routines when possible. This book will show you how to leverage all the latest features and much more. This book shows you how to build powerful systems and drops you into real-world situations. You will learn to develop high-quality command-line tools that utilize the powerful shell capabilities and perform well using Go's in-built concurrency mechanisms. Scale, performance, and high availability lie at the heart of our projects, and the lessons learned throughout this book will arm you with everything you need to build world-class solutions. You will get a feel for app deployment using Docker and Google App Engine. Each project could form the basis of a start-up, which means they are directly applicable to modern software markets. Style and approach This book provides fun projects that involve building applications from scratch. These projects will teach you to build chat applications, a distributed system, and a recommendation system.

LEARN PYTHON PROGRAMMING

AN IN-DEPTH INTRODUCTION TO THE FUNDAMENTALS OF PYTHON

Packt Publishing Ltd Get up and running with Python 3.9 through concise tutorials and practical projects in this fully updated third edition Key FeaturesExtensively revised with richer examples, Python 3.9 syntax, and new chapters on APIs and packaging and distributing Python code Discover how to think like a Python programmerLearn the fundamentals of Python through real-world projects in API development, GUI programming, and data science Book Description Learn Python Programming, Third Edition is both a theoretical and practical introduction to Python, an extremely flexible and powerful programming language that can be applied to many disciplines. This book will make learning Python easy and give you a thorough understanding of the language. You'll learn how to write programs, build modern APIs, and work with data by using renowned Python data science libraries. This revised edition covers the latest updates on API management, packaging applications, and testing. There is also broader coverage of context managers and

an updated data science chapter. The book empowers you to take ownership of writing your software and become independent in fetching the resources you need. You will have a clear idea of where to go and how to build on what you have learned from the book. Through examples, the book explores a wide range of applications and concludes by building real-world Python projects based on the concepts you have learned. What you will learn Get Python up and running on Windows, Mac, and Linux Write elegant, reusable, and efficient code in any situation Avoid common pitfalls like duplication, complicated design, and over-engineering Understand when to use the functional or object-oriented approach to programming Build a simple API with FastAPI and program GUI applications with Tkinter Get an initial overview of more complex topics such as data persistence and cryptography Fetch, clean, and manipulate data, making efficient use of Python's built-in data structures Who this book is for This book is for everyone who wants to learn Python from scratch, as well as experienced programmers looking for a reference book. Prior knowledge of basic programming concepts will help you follow along, but it's not a prerequisite.

INTRODUCTION TO PYTHON PROGRAMMING AND DEVELOPING GUI APPLICATIONS WITH PYQT

Muska/Lipman Covers the basics of Python programming, file handling, and GUI application development in PyQT.

PYTHON PROGRAMMING

AN INTRODUCTION TO COMPUTER SCIENCE

Franklin, Beedle & Associates, Inc. This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS0. It is difficult for many students to master basic concepts in computer science and programming. A large portion of the confusion can be blamed on the complexity of the tools and materials that are traditionally used to teach CS1 and CS2. This textbook was written with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

ARCGIS BLUEPRINTS

Packt Publishing Ltd Explore the robust features of Python to create real-world ArcGIS applications through exciting, hands-on projects About This Book Get to grips with the big world of Python add-ins and wxPython in GUI development to implement their features in your application Integrate advanced Python libraries, ArcPy mapping, and data access module techniques to develop a mapping application Construct a top-notch intermediate-to-advanced project by accessing ArcGIS Server and ArcGIS Online resources through the ArcGIS REST API using a project-based approach Who This Book Is For If you have prior experience building simple apps with ArcGIS and now have a fancy for developing a more challenging and complex desktop application in ArcGIS, then this book is ideal for you. What You Will Learn Automate the creation of creative output data visualizations including maps, charts, and graphs Explore ways to use the ArcPy Mapping module and Data-driven Pages to automate the creation of map books in your own project Develop applications that use the Plotly platform and library to create stunning charts and graphs that can be integrated into ArcGIS Desktop Build tools that access REST services and download data to a local geodatabase Design, build, and integrate advanced GUIs with wxPython and ArcGIS Desktop in ArcGIS Get clued up about constructing applications that export data to Google Earth Pro to automate time-consuming complex processes Maximize the access of ArcGIS Server and ArcGIS Online using the ArcGIS REST API with Python In Detail This book is an immersive guide to take your ArcGIS Desktop application development skills to the next level It starts off by providing detailed description and examples of how to create ArcGIS Desktop Python toolboxes that will serve as containers for many of the applications that you will build. We provide several practical projects that involve building a local area/community map and extracting wildfire data. You will then learn how to build tools that can access data from ArcGIS Server using the ArcGIS REST API. Furthermore, we deal with the integration of additional open source Python libraries into your applications, which will help you chart and graph advanced GUI development; read and write JSON, CSV, and XML format data sources; write outputs to Google Earth Pro, and more. Along the way, you will be introduced to advanced ArcPy Mapping and ArcPy Data Access module techniques and use data-driven Pages to automate the creation of map books. Finally, you will learn advanced techniques to work with video and social media feeds. By the end of the book, you will have your own desktop application without having spent too much time learning sophisticated theory. Style and approach This is an easy-to-follow, project-based guide that guides you through the whole ArcGIS theme with practical, real-world examples and a systematic approach.

CREATE GRAPHICAL USER INTERFACES WITH PYTHON

HOW TO BUILD WINDOWS, BUTTONS, AND WIDGETS FOR YOUR PYTHON PROJECTS

PYTHON FOR EXCEL

"O'Reilly Media, Inc." While Excel remains ubiquitous in the business world, recent Microsoft feedback forums are full of requests to include Python as an Excel scripting language. In fact, it's the top feature requested. What makes this combination so compelling? In this hands-on guide, Felix Zumstein--creator of xlwings, a popular open source package for automating Excel with Python--shows experienced Excel users how to integrate these two worlds efficiently. Excel has added quite a few new capabilities over the past couple of years, but its automation language, VBA, stopped evolving a long time ago. Many Excel power users have already adopted Python for daily automation tasks. This guide gets you started. Use Python without extensive programming knowledge Get started with modern tools, including Jupyter notebooks and Visual Studio code Use pandas to acquire, clean, and analyze data and replace typical Excel calculations Automate tedious tasks like consolidation of Excel workbooks and production of Excel reports Use xlwings to build interactive Excel tools that use Python as a calculation engine Connect Excel to databases and CSV files and fetch data from the internet using Python code Use Python as a single tool to replace VBA, Power Query, and Power Pivot

MASTERING JAVAFX 10

BUILD ADVANCED AND VISUALLY STUNNING JAVA APPLICATIONS

Packt Publishing Ltd JavaFX 10 is used to create media-rich client applications. If you are a Java developer and want to create graphical applications and skill up to become a pro at Java GUI programming, then this is the right choice for you. You will be guided through the different components of the JavaFX application, to master and combine them.

BEGINNER'S GUIDE TO PYTHON PROGRAMMING

LEARN PYTHON 3 FUNDAMENTALS, PLOTTING AND TKINTER GUI DEVELOPMENT EASILY

Createspace Independent Publishing Platform This book covers Python 3 programming fundamentals together with 2D and 3D plotting, numerical library numpy, file/SQLite database operations and tkinter graphical user interface development (i.e. developing desktop applications) in Python. The author assumes that you have little or no programming experience. The book is divided into 4 main parts. The first part of the book includes Chapters 1 to 9 where the fundamentals of the Python programming language is explained. The book starts with the installation of Python 3 programming environment and the simplest "Hello World" example. Then, all the main Python concepts such as conditional statements, loops, object-oriented programming, functions and modules are given. The second part of the book consists of Chapters 10 and 11 which cover file and SQLite database operations in detail. The third part of the book teaches the basics of the numpy numerical library and the matplotlib plotting library in Chapters 12 and 13. The reader will be able to plot data saved in the numpy arrays in 2D or 3D after completing this part. And the last part of the book is about the graphical user interface (GUI) development using the tkinter library in Chapter 14. Layout management and all the frequently used tkinter widgets are given with detailed and working examples. This book includes 275 figures and 171 examples used for explaining Python programming clearly. Full resolution colour figures and example files can be downloaded from the book's companion website www.yamaclis.com/python.

THE BIG BOOK OF SMALL PYTHON PROJECTS

81 EASY PRACTICE PROGRAMS

No Starch Press Best-selling author Al Sweigart shows you how to easily build over 80 fun programs with minimal code and maximum creativity. If you've mastered basic Python syntax and you're ready to start writing programs, you'll find The Big Book of Small Python Projects both enlightening and fun. This collection of 81 Python projects will have you making digital art, games, animations, counting programs, and more right away. Once you see how the code works, you'll practice re-creating the programs and experiment by adding your own custom touches. These simple, text-based programs are 256 lines of code or less. And whether it's a vintage screensaver, a snail-racing game, a clickbait headline generator, or animated strands of DNA, each project is designed to be self-contained so you can easily share it online. You'll create: • Hangman, Blackjack, and other games to play against your friends or the computer • Simulations of a forest fire, a million dice rolls, and a Japanese abacus • Animations like a virtual fish tank, a rotating cube, and a bouncing DVD logo screensaver • A first-person 3D maze game • Encryption programs that use ciphers like ROT13 and Vigenère to conceal text If you're tired of standard step-by-step tutorials, you'll love the learn-by-doing approach of The Big Book of Small Python Projects. It's proof that good things come in small programs!

PYSIDE GUI APPLICATION DEVELOPMENT

Packt Publishing Ltd Develop more dynamic and robust GUI applications using PySide, an open source cross-platform UI framework About This Book Designed for beginners to help you get started with GUI application development Develop your own applications by creating customized widgets and dialogs Written in a simple and elegant structure so you easily understand how to program various GUI components Who This Book Is For This book is written for Python programmers who want to learn about GUI programming. It is also suitable for those who are new to Python but are familiar with object-oriented programming. What You Will Learn Program GUI applications in an easy and efficient way Download and install PySide, a cross-platform GUI development toolkit for Python Create menus, toolbars, status bars, and child windows Develop a text editor application on your own Connect your GUI to a database and manage it Execute SQL queries by handling databases In Detail Elegantly-built GUI applications are always a massive hit among users. PySide is an open source software project that provides Python bindings for the Qt cross-platform UI framework. Combining the power of Qt and Python, PySide provides easy access to the Qt framework for Python developers and also acts as an excellent rapid application development platform. This book will take you through everything you need to know to develop UI applications. You will learn about installing and building PySide in various major operating systems as well as the basics of GUI programming. The book will then move on to discuss event management, signals and slots, and the widgets and dialogs available with PySide. Database interaction and manipulation is also covered. By the end of this book, you will be able to program GUI applications efficiently and master how to develop your own applications and how to run them across platforms. Style and approach This is an accessible and practical guide to developing GUIs for Python applications.

MASTERING GUI PROGRAMMING WITH PYTHON

DEVELOP IMPRESSIVE CROSS-PLATFORM GUI APPLICATIONS WITH PYQT

Packt Publishing Ltd An advanced guide to creating powerful high-performance GUIs for modern, media-rich applications in various domains such as business and game development Key Features Gain comprehensive knowledge of Python GUI development using PyQt 5.12 Explore advanced topics including multithreaded programming, 3D animation, and SQL databases Build cross-platform GUIs for Windows, macOS, Linux, and Raspberry Pi Book Description PyQt5 has long been the most powerful and comprehensive GUI

framework available for Python, yet there is a lack of cohesive resources available to teach Python programmers how to use it. This book aims to remedy the problem by providing comprehensive coverage of GUI development with PyQt5. You will get started with an introduction to PyQt5, before going on to develop stunning GUIs with modern features. You will then learn how to build forms using QWidgets and learn about important aspects of GUI development such as layouts, size policies, and event-driven programming. Moving ahead, you'll discover PyQt5's most powerful features through chapters on audio-visual programming with QtMultimedia, database-driven software with QtSQL, and web browsing with QtWebEngine. Next, in-depth coverage of multithreading and asynchronous programming will help you run tasks asynchronously and build high-concurrency processes with ease. In later chapters, you'll gain insights into QOpenGLWidget, along with mastering techniques for creating 2D graphics with QPainter. You'll also explore PyQt on a Raspberry Pi and interface it with remote systems using QtNetwork. Finally, you will learn how to distribute your applications using setuptools and PyInstaller. By the end of this book, you will have the skills you need to develop robust GUI applications using PyQt. What you will learn

Get to grips with the inner workings of PyQt5
Learn how elements in a GUI application communicate with signals and slots
Learn techniques for styling an application
Explore database-driven applications with the QtSQL module
Create 2D graphics with QPainter
Delve into 3D graphics with QOpenGLWidget
Build network and web-aware applications with QtNetwork and QtWebEngine

Who this book is for This book is for programmers who want to create attractive, functional, and powerful GUIs using the Python language. You'll also find this book useful if you are a student, professional, or anyone who wants to start exploring GUIs or take your skills to the next level. Although prior knowledge of the Python language is assumed, experience with PyQt, Qt, or GUI programming is not required.