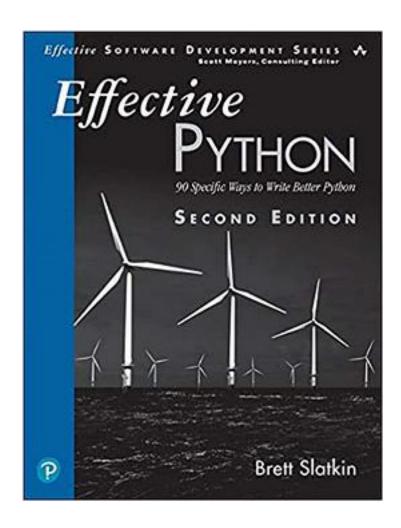
Effective Python: 2nd Edition



Effective Python: 2nd Edition_下载链接1_

著者:Brett Slatkin

出版者:Addison-Wesley Professional

出版时间:2019-12-2

装帧:Paperback

isbn:9780134854717

Updated and Expanded for Python 3

It's easy to start developing programs with Python, which is why the language is so

popular. However, Python's unique strengths, charms, and expressiveness can be hard to grasp, and there are hidden pitfalls that can easily trip you up.

This second edition of Effective Python will help you master a truly "Pythonic" approach to programming, harnessing Python's full power to write exceptionally robust and well-performing code. Using the concise, scenario-driven style pioneered in Scott Meyers' best-selling Effective C++, Brett Slatkin brings together 90 Python best practices, tips, and shortcuts, and explains them with realistic code examples so that you can embrace Python with confidence.

Drawing on years of experience building Python infrastructure at Google, Slatkin uncovers little-known quirks and idioms that powerfully impact code behavior and performance. You'll understand the best way to accomplish key tasks so you can write code that's easier to understand, maintain, and improve. In addition to even more advice, this new edition substantially revises all items from the first edition to reflect how best practices have evolved.

Key features include

30 new actionable guidelines for all major areas of Python

Detailed explanations and examples of statements, expressions, and built-in types

Best practices for writing functions that clarify intention, promote reuse, and avoid bugs

Better techniques and idioms for using comprehensions and generator functions

Coverage of how to accurately express behaviors with classes and interfaces

Guidance on how to avoid pitfalls with metaclasses and dynamic attributes

More efficient and clear approaches to concurrency and parallelism

Solutions for optimizing and hardening to maximize performance and quality

Techniques and built-in modules that aid in debugging and testing

Tools and best practices for collaborative development

Effective Python will prepare growing programmers to make a big impact using Python.

作者介绍:

Brett Slatkin is a principal software engineer at Google. He is the technical co-founder of Google Surveys, the co-creator of the PubSubHubbub protocol, and he launched Google's first cloud computing product (App Engine). Fourteen years ago, he cut his teeth using Python to manage Google's enormous fleet of servers. Outside of his day job, he likes to play piano and surf (both poorly). He also enjoys writing about programming-related topics on his personal website (https://onebigfluke.com). He earned his B.S. in computer engineering from Columbia University in the City of New York. He lives in San Francisco.

目录: Preface

Acknowledgments About the Author

1. Pythonic Thinking Item 1: Know Which Version of Python You're Using

Item 2: Follow the PEP 8 Style Guide

Item 3: Know the Differences Between bytes and str

Item 4: Prefer Interpolated F-Strings Over C-style Format Strings and str.format

Item 5: Write Helper Functions Instead of Complex Expressions Item 6: Prefer Multiple Assignment Unpacking Over Indexing

Item 7: Prefer enumerate Over range

Item 8: Use zip to Process Iterators in Parallel Item 9: Avoid else Blocks After for and while Loops

Item 10: Prevent Repetition with Assignment Expressions

2. Lists and Dictionaries

Item 11: Know How to Slice Sequences

Item 12: Avoid Striding and Slicing in a Single Expression

Item 13: Prefer Catch-All Unpacking Over Slicing

Item 14: Sort by Complex Criteria Using the key Parameter Item 15: Be Cautious When Relying on dict Insertion Ordering

Item 16: Prefer get Over in and KeyError to Handle Missing Dictionary Keys

Item 17: Prefer defaultdict Over setdefault to Handle Missing Items in Internal State Item 18: Know How to Construct Key-Dependent Default Values with ___missing___ 3. Functions

Item 19: Never Unpack More Than Three Variables When Functions Return Multiple

Item 20: Prefer Raising Exceptions to Returning None

Item 21: Know How Closures Interact with Variable Scope

Item 22: Reduce Visual Noise with Variable Positional Arguments Item 23: Provide Optional Behavior with Keyword Arguments

Item 24: Use None and Docstrings to Specify Dynamic Default Arguments Item 25: Enforce Clarity with Keyword-Only and Positional-Only Arguments

Item 26: Define Function Decorators with functools.wraps

4. Comprehensions and Generators

Item 27: Use Comprehensions Instead of map and filter

Item 28: Avoid More Than Two Control Subexpressions in Comprehensions

Item 29: Avoid Repeated Work in Comprehensions by Using Assignment Expressions

Item 30: Consider Generators Instead of Returning Lists Item 31: Be Defensive When Iterating Over Arguments

Item 32: Consider Generator Expressions for Large List Comprehensions

Item 33: Compose Multiple Generators with yield from Item 34: Avoid Injecting Data into Generators with send

Item 35: Avoid Causing State Transitions in Generators with throw Item 36: Consider itertools for Working with Iterators and Generators

5. Classes and Interfaces

Item 37: Compose Classes Instead of Nesting Many Levels of Built-in Types

Item 38: Accept Functions Instead of Classes for Simple Interfaces

Item 39: Use @classmethod Polymorphism to Construct Objects Generically

Item 40: Initialize Parent Classes with super

Item 41: Consider Composing Functionality with Mix-in Classes

Item 42: Prefer Public Attributes Over Private Ones

Item 43: Inherit from collections.abc for Custom Container Types

6. Metaclasses and Attributes Item 44: Use Plain Attributes Instead of Setter and Getter Methods Item 45: Consider @property Instead of Refactoring Attributes Item 46: Use Descriptors for Reusable @property Methods Item 47: Use __getattr__, __getattribute__, and __setattr__ for Lazy Attributes Item 48: Validate Subclasses with __init_subclass_ __init_subclass_ Item 49: Register Class Existence with Item 50: Annotate Class Attributes with __set_name_ Item 51: Prefer Class Decorators Over Metaclasses for Composable Class Extensions 7. Concurrency and Parallelism Item 52: Use subprocess to Manage Child Processes Item 53: Use Threads for Blocking I/O, Avoid for Parallelism Item 54: Use Lock to Prevent Data Races in Threads Item 55: Use Queue to Coordinate Work Between Threads Item 56: Know How to Recognize When Concurrency Is Necessary Item 57: Avoid Creating New Thread Instances for On-demand Fan-out Item 58: Understand How Using Queue for Concurrency Requires Refactoring Item 59: Consider ThreadPoolExecutor When Threads Are Necessary for Concurrency Item 60: Achieve Highly Concurrent I/O with Coroutines Item 61: Know How to Port Threaded I/O to asyncio Item 62: Mix Threads and Coroutines to Ease the Transition to asyncio Item 63: Avoid Blocking the asyncio Event Loop to Maximize Responsiveness Item 64: Consider concurrent futures for True Parallelism 8. Robustness and Performance Item 65: Take Advantage of Each Block in try/except/else/finally Item 66: Consider contextlib and with Statements for Reusable try/finally Behavior Item 67: Use datetime Instead of time for Local Clocks Item 68: Make pickle Reliable with copyreg Item 69: Use decimal When Precision Is Paramount Item 70: Profile Before Optimizing Item 71: Prefer degue for Producer–Consumer Queues for Producer-Consumer Queues Item 72: Consider Searching Sorted Sequences with bisect Item 73: Know How to Use heapq for Priority Queues Item 74: Consider memoryview and bytearray for Zero-Copy Interactions with bytes 9. Testing and Debugging Item 75: Use repr Strings for Debugging Output Item 76: Verify Related Behaviors in TestCase Subclasses Item 77: Isolate Tests from Each Other with setUp, tearDown, setUpModule, and tearDownModule Item 78: Use Mocks to Test Code with Complex Dependencies Item 79: Encapsulate Dependencies to Facilitate Mocking and Testing Item 80: Consider Interactive Debugging with pdb Item 81: Use tracemalloc to Understand Memory Usage and Leaks 10. Collaboration Item 82: Know Where to Find Community-Built Modules Item 83: Use Virtual Environments for Isolated and Reproducible Dependencies Item 84: Write Docstrings for Every Function, Class, and Module Item 85: Use Packages to Organize Modules and Provide Stable APIs Item 86: Consider Module-Scoped Code to Configure Deployment Environments Item 87: Define a Root Exception to Insulate Callers from APIs Item 88: Know How to Break Circular Dependencies Item 89: Consider warnings to Refactor and Migrate Usage Item 90: Consider Static Analysis via typing to Obviate Bugs

· · · · · (<u>收起</u>)

Effective Python: 2nd Edition_下载链接1_



这本书除了第六章的metaclass以外对于新手还是比较友好的,每节末尾的小总结很不错,可以快速回顾小节内容。

另外,作者在讲某个概念的时候,往往会从问题开始,先给出初步的解决方案,然后再慢慢改进,最后提出关键的概念,比较循序渐进。

几个之前不知道的技巧: enumerate, F-string, generator & itertool, decoration, classmethod, decorator &

metaclass,ThreadPoolExecutor,try/except/else/finally, Cython,unittest. 不足的是作者没有去和其他语言比较,或者去讨论Python核心的一些东西,比如everyt hing is an object等等。

Effective Python: 2nd Edition 下载链接1

书评

大部分知识之前已经学习过,这次就写research project会需要到的代码知识过一遍。1. enumerate: `for i, a in enumerate(A)` 2. zip: `for a, b in zip(A, B)` 3. list comprehension `[x for x in a]` 4. generator `(x for x in a)` 5. try/except/else/finally: 6. not use...

Item 24: Use @classmethod polymorphism to construct object generically 可以处理如何动态构建模型的问题。 Item 25: Use `super(__class__, self).__init__()` when inheriting Item 29: use plain attributes instead of getter and setters. Shortingcoming of @property...

Effective Python 59 SPECIFIC WAYS TO WRITE BETTER PYTHON 这本书终于读完了。从这本书里学到不少经验,以及之前忽略的知识。书中部分内容也 是库的内容(这么说有失公允,大部分属都会有抄库文档的嫌疑的,因为文档包含了最多的信息),也有很多内容基本上是常识,比如七八章...

其他部分(并发,模块,部署)大部分都了解,更愿意看一下 OOP 的想法. 在这里稍微记一下.尽量使用异常来表示特殊情况,而不要 return None 现在看, 有两种比较棘手的情况: (1) 有时候一个方法里涉及数个含网络请求(which means 必须考虑失败)的调用,会写成这样: def call0(): ... -----

Effective Python: 2nd Edition_下载链接1_