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Nota di contenuto	Front Cover; Python Forensics: A Workbench for Inventing and Sharing Digital Forensic Technology; Copyright; Dedication; Acknowledgments; Endorsements; Contents; List of figures; About the Author; About the Technical Editor; Foreword; Preface; Intended Audience; Prerequisites; Reading this Book; Supported Platforms; Download Software; Comments, Questions, and Contributions; Chapter 1: Why Python Forensics?; Introduction; Cybercrime investigation challenges; How can the Python programming environment help meet these challenges?; Global support for Python; Open source and platform independence Lifecycle positioningCost and barriers to entry; Python and the Daubert evidence standard; Organization of the book; Chapter review; Summary questions; Additional Resources; Chapter 2: Setting up a Python Forensics Environment; Introduction; Setting up a python forensics environment; The right environment; The Python Shell; Choosing a python version; Installing python on windows; Python packages and modules; The Python Standard Library; What is included in the standard library?; Built-in functions; hex() and bin(); range(); Other built-in functions; Built-in constants; Built-in types Built-in exceptionsFile and directory access; Data compression and archiving; File formats; Cryptographic services; Operating system

services; Standard Library summary; Third-party packages and modules; The natural language toolkit [NLTK]; Twisted matrix [TWISTED]; Integrated development environments; What are the options?; IDLE; WingIDE; Python running on Ubuntu Linux; Python on mobile devices; iOS Python app; Windows 8 phone; A virtual machine; Chapter review; Summary questions; Looking ahead; Additional Resources; Chapter 3: Our First Python Forensics App; Introduction Naming conventions and other considerations Constants; Local variable name; Global variable name; Functions name; Object name; Module; Class names; Our first application ``one-way file system hashing ; Background; One-way hashing algorithms basic characteristics; Popular cryptographic hash algorithms?; What are the tradeoffs between one-way hashing algorithms?; What are the best-use cases for one-way hashing algorithms in forensics?; Fundamental requirements; Design considerations; Program structure; Main function; ParseCommandLine; WalkPath function; HashFile function; CSVWriter (class) Logger Writing the code; Code walk-through; Examining main-code walk-through; ParseCommandLine(); ValidatingDirectoryWritable; WalkPath; HashFile; CSVWriter; Full code listing pfish.py; Full code listing _pfish.py; Results presentation; Chapter review; Summary questions; Looking ahead; Additional Resources; Chapter 4: Forensic Searching and Indexing Using Python; Introduction; Keyword context search; How can this be accomplished easily in Python?; Fundamental requirements; Design considerations; Main function; ParseCommandLine; SearchWords function; PrintBuffer functions; logger Writing the code

Sommario/riassunto

Python Forensics provides many never-before-published proven forensic modules, libraries, and solutions that can be used right out of the box. In addition, detailed instruction and documentation provided with the code samples will allow even novice Python programmers to add their own unique twists or use the models presented to build new solutions. Rapid development of new cybercrime investigation tools is an essential ingredient in virtually every case and environment. Whether you are performing post-mortem investigation, executing live triage, extracting evidence from mobile
