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Autore	Toms Silas
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Nota di contenuto	Cover; Copyright; Credits; About the Author; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: Introduction to Python for ArcGIS; Overview of Python; Python as a programming language; Interpreted language; Standard (built-in) library; The glue language; Wrapper modules; The basics of Python; Import statements; Variables; For loops; If/Elif/Else statements; While statements; Comments; Data types; Strings; Integers; Floats; Lists; Tuples; Dictionaries; Iterable data types; Other important concepts; Indentation; Functions; Keywords; Namespaces; Zero-based indexing Important Python Modules for GIS Analysis The ArcPy module; The Operating System (OS) module; The Python System (SYS) module; The XLRD and XLWT modules; Commonly used built-in functions; Commonly used standard library modules; Summary; Chapter 2: Configuring the Python Environment; What is a Python script?; How Python executes a script; What is the Python interpreter?; Where is the Python interpreter located?; Which Python interpreter should be used?; How does the computer know where the interpreter is?; Make Python scripts executable when clicked on; Integrated Development

Environments; IDLE

Python Win Aptana Studio 3; IDE summary; Python folder structure; Where modules reside; Using Python's sys module to add a module; The sys.path.append() method; Summary; Chapter 3: Creating the First Python Script; Prerequisites; Model Builder; Creating a model and exporting to Python; Modeling the Select and Buffer tools; Adding the Intersect tool; Tallying the analysis results; Exporting the model and adjusting the script; The automatically generated script; File paths in Python; Continuing the script analysis: the arcPy tools; The intersect tool and string manipulation

The string manipulation method 1-string addition The string manipulation method 2-string formatting #1; The string manipulation method 3-string formatting#2 ; Adjusting the Script; Adding the CSV Module to the script; Accessing the data: Using a cursor; The final script; Summary; Chapter 4: Complex ArcPy Scripts and Generalizing Functions; Python functions-Avoid repeating code; Technical definition of functions; A first function; Functions with parameters; Using functions to replace repetitive code; More generalization of the functions; Summary

Chapter 5: ArcPy Cursors: Search, Insert and Update The data access module; Attribute field interactions; Update cursors; Updating the shape field; Adjusting a point location; Deleting a row using an Update Cursor; Using an Insert Cursor; Inserting a polyline geometry; Inserting a polygon geometry; Summary; Chapter 6: Working with ArcPy Geometry Objects; ArcPy geometry object classes; ArcPy Point objects; ArcPy Array objects; ArcPy Polyline objects; ArcPy Polygon objects; Polygon object buffers; Other Polygon object methods; ArcPy geometry objects; ArcPy PointGeometry objects; Summary

Chapter 7: Creating a Script Tool

Sommario/riassunto

If you are a GIS student or professional who needs an understanding of how to use ArcPy to reduce repetitive tasks and perform analysis faster, this book is for you. It is also a valuable book for Python programmers who want to understand how to automate geospatial analyses.