Book Review

Python for Beginners

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Contains 13 Chapters, Case studies and references
Python is a free general-purpose programming language with beautiful syntax. It is available across many platforms, including Windows, Linux and macOS. Due to its ease of learning and object-oriented features, Python is used to develop and demonstrate applications quickly.

In the first chapter, “Introduction to Python,” the authors discussed Python in general and installed it on a system. They installed a text editor to facilitate writing Python code and running snippets in a terminal session, and we ran our first program, hello_world.py. We have discussed the characteristics, features and types of programming support offered by Python.

In the following chapter, “Data Types and Variables,” the authors presented a preview of the Python Integer Values, followed by a discussion on identifiers. They reminded us that a data type, also referred to as a type, is a property of data that informs the interpreter or compiler how the programmer intends to use the available information.

In the earlier part, (Section 2.1), they explained how we can use the + operator to add integers and concatenate strings. Program 3.1 (addition.py) shows how the addition operator (+) can be used to add two integers provided by the user. In the third chapter, Operators, they described various types of complicated arithmetic expressions involving many operators and operands. The rules for mixed arithmetic have been applied on an operator-by-operator basis across multiple operator types in Python, including arithmetic, logical, assignment, bitwise, membership, identity, and comparison operators.

In the fourth chapter on the Branch Control Structure, the authors begin with the Simple If Statement, supported by a flowchart. In the content, various control structures are described that enable control over the flow of program execution. The four fundamentals of control structure are detailed with suitable illustrations.

The next chapter, Iterative Control Structure, describes the logic behind the looping constructs ‘while’ and ‘for’, which allow sections of code to be executed repeatedly while a condition holds. Large programs are often challenging to manage and are divided into smaller units known as functions, as the authors claim in Chapter 6. The importance of this part lies in the fact that large programs are often challenging to manage and are divided into smaller units known as functions.The section on ‘Lists’ specifies that the lists prohibit each object from providing a single variable that is less powerful and more vulnerable to errors when you try to run those operations on certain items. Easy lists or lists with different values may be nested lists. A list is one of Python’s most versatile data structures because it can add, remove, and modify elements.

One of the most popular Python data structures is the list, and another is the dictionary. The main properties of the dictionary are discussed in the eighth chapter on dictionaries, which explains how to

access dictionary items in the list. Thus, lists and dictionaries tend to fit various types of conditions. A tuple is an immutable, ordered collection of values of potentially different types, used to bundle similar values without requiring a particular form to store them. The ninth chapter, Tuples and Sets, discusses the tuple, an immutable data structure comprising ordered, heterogeneous items.

In the tenth chapter, "Strings and Special Methods," the authors state that Python strings are immutable, meaning that once created, they cannot be changed. The basic idea of object-oriented programming (OOP) is that we use objects to model real-world things that we want to represent inside our programs and provide a simple way to access their functionality that would otherwise be hard or impossible to utilize. Large programs are challenging to write. In the eleventh chapter, Object-Oriented Programming, the authors stated that objects are used to model real-world entities represented in programs; an object is an instance of a class.

In the twelfth chapter, "GUI Programming Using Tkinter", the authors explained the Python interface, the Tkinter and further detailed how it is used to construct Python GUI programs. One can learn to build a window that incorporates various GUI components using Tkinter. Tkinter is well-suited for small, quick GUI applications, and because it runs on more platforms than any other Python GUI toolkit, it is a good choice when portability is the primary concern.

In the last chapter, "Python Exception Handling GUI Programming Using Tkinter,"the authors discussed exception handling, which helps break the typical control flow of a program by providing a mechanism to decouple Python error handling and make the code more robust. Many Python case studies with illustrations and relevant code support the thirteen chapters.

The appendix includes a comprehensive list of 116 references that direct readers to additional sources. The index presented at the end is more specific.

This publication is beneficial to learners and practitioners of Python. A valuable addition to any library!

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