

Chapter 1

Introduction

Welcome to *Real Python's Python Basics* book, fully updated for Python 3.9! In this book, you'll learn real-world Python programming techniques, illustrated with useful and interesting examples.

Whether you're a new programmer or a professional software developer looking to dive into a new language, this book will teach you all the practical Python that you need to get started on projects of your own.

No matter what your ultimate goals may be, if you work with a computer at all, then you'll soon be finding endless ways to improve your life by automating tasks and solving problems through Python programs that you create.

But what's so great about Python as a programming language? For one, Python is open source freeware, meaning you can download it for free and use it for any purpose, commercial or not.

Python also has an amazing community that has built a number of useful tools that you can use in your own programs. Need to work with PDF documents? There's a comprehensive tool for that. Want to collect data from web pages? No need to start from scratch!

Python was built to be easier to use than other programming languages. It's usually much easier to read Python code and much faster to write code in Python than in other languages.

For instance, here's some basic code written in C, another commonly used programming language:

```
#include <stdio.h>

int main(void)
{
    printf("Hello, World\n");
}
```

All the program does is show the text `Hello, World` on the screen. That was a lot of work to output one phrase! Here's the same program written in Python:

```
print("Hello, World")
```

That's pretty simple, right? The Python code is faster to write and easier to read. We find that it looks friendlier and more approachable, too!

At the same time, Python has all the functionality of other languages and more. You might be surprised by how many professional products are built on Python code: Instagram, YouTube, Reddit, Spotify, to name just a few.

Python is not only a friendly and fun language to learn, but it also powers the technology behind multiple world-class companies and offers fantastic career opportunities for any programmer who masters it.

1.1 Why This Book?

Let's face it: there's an overwhelming amount of information about Python on the Internet. But many beginners studying on their own have trouble figuring out *what* to learn and *in what order* to learn it.