

101 Python Challenges

- With Solutions / Code Listings -

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101Computing.net

About the Author

Philippe Kerampran has worked as an ICT & Computer Science teacher in a comprehensive UK High School/Academy & 6th Form Centre since 2006. As a Head of Department he has introduced a computing curriculum and computer science courses at GCSE and A Level. He is passionate about finding ways to share his enjoyment of computing with students while developing their abilities to become independent and resourceful learners.

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“I think everybody in this country should learn how to program a computer because it teaches you how to think.”

Steve Jobs
Apple Co-founder

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Introduction

By choosing this book, you have embarked on an exciting journey to learn or to improve your coding skills using the Python programming language. So welcome on board!

Coding knowledge is nowadays considered as a must-have 21st century skill. The world we live in is surrounded by computer algorithms. These can be found not only in computing devices and smartphones but also in everyday objects through the use of embedded technologies. This includes cars, house appliances, wearable technologies as well as robotics and drones. All of these technologies are controlled by computer algorithms. So effectively we can say that coding is the new buzz language of today's tech-savvy world.

One of the main reasons for developing your coding knowledge is that, as Steve Jobs described it, learning how to code “teaches you how to think”. Effectively, while designing and writing your own computer algorithms, you are going to develop your analytical skills, creative thinking skills, problem solving and troubleshooting skills. You will also apply other essential maths and science based knowledge to your algorithms.

The purpose of this book is to bring together a collection of 101 challenges that will help you develop your Python coding skills as well as your computational knowledge. This selection of challenges from the 101computing.net blog will cover the essential skills used in procedural programming, focusing on the key programming constructs: sequencing, selection and iteration. You will find out more about these programming concepts in the first three chapters of this book and you will apply these in all of the 101 challenges.

How to use this book?

This book is targeted at both learners and educators who want to find a challenging and enthusing approach to develop their programming skills