



Certificate of Achievement

Matthias Giger

has completed the following course:

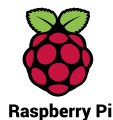
PROGRAMMING 103: SAVING AND STRUCTURING DATA
RASPBERRY PI FOUNDATION AND NATIONAL CENTRE FOR COMPUTING EDUCATION

This course covered how to use Python to write data to and read from external files. Learners discovered different types of structured data, including CSV files, JSON files, Python dictionaries, and SQL databases, and they had a chance to use these data structures in programming activities.

3 weeks, 2 hours per week



Dr Sue Sentance
Chief Learning Officer
Raspberry Pi Foundation



The person named on this certificate has completed the activities in the attached transcript. For more information about Certificates of Achievement and the effort required to become eligible, visit futurelearn.com/proof-of-learning/certificate-of-achievement.

This learner has not verified their identity. The certificate and transcript do not imply the award of credit or the conferment of a qualification from Raspberry Pi Foundation and National Centre for Computing Education.



Raspberry Pi



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STUDY REQUIREMENT

3 weeks, 2 hours per week

LEARNING OUTCOMES

- Demonstrate how to use Python to store and retrieve persistent data
- Explain the importance of data persistence and describe where it is used
- Compare different types of structured data
- Modify a program to store data in a JSON file
- Perform operations on a database using SQL statements

SYLLABUS

- Creating, reading from, and writing to files using Python
- The importance of data persistence
- Structuring data using CSV files, Python dictionaries, and JSON files
- How data structures aid compatibility between systems
- Interacting with databases using SQL and Python