



Certificate of Achievement

Matthias Giger

has completed the following course:

INTRODUCTION TO ENCRYPTION AND CRYPTOGRAPHY RASPBERRY PI FOUNDATION AND NATIONAL CENTRE FOR COMPUTING EDUCATION

This course on encryption covered a range of different encryption methods, including the Caesar and Vigenère Ciphers, as well as modern symmetric and asymmetric encryption. Learners looked at the advantages and disadvantages of different encryption algorithms, and implemented some of these algorithm

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 certificate represents proof of learning. It is not a formal qualification, degree, or part of a degree.



Raspberry Pi



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STUDY REQUIREMENT

3 weeks, 2 hours per week

LEARNING OUTCOMES

- Describe the general process of encryption and decryption
- Apply a Caesar Cipher and a Vigenère Cipher
- Discuss the advantages and disadvantages of different encryption algorithms
- Compare symmetric and asymmetric encryption
- Produce an implementation of a Caesar Cipher and RSA encryption in Python
- Demonstrate methods of breaking simple encryption schemes
- Describe how encryption is used in the modern world, and some of the possible ethical implications of this

SYLLABUS

- A brief look at the history of encryption
- The encryption and decryption process, and the importance of keys
- The Caesar and Vigenère Ciphers
- Symmetric and asymmetric encryption schemes
- Public key encryption in the real world
- An introduction to quantum cryptography