

Revision Guide for A-Level Computer Science Unit 1.3.1 (SLR 09)

1.3.1 Compression, Encryption and Hashing

Candidates need to understand the need for compression, especially when transferring data via the Internet.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates need to understand the difference between lossy and lossless compression, and the benefits and drawbacks of each type.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates need to be able to recommend a type of compression for a given scenario.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates need to understand how run-length encoding can reduce the size of a file for example with a text file or image.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates should understand how dictionary coding works by substituting entries with a unique code.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates should have practical experience of using these algorithms with small example files.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates should understand the need for encryption.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates should understand how symmetric and asymmetric encryption work to encrypt and decrypt data.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates should understand the need for and purpose of using hashing algorithms to store data.	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆
Candidates should be aware of different uses for hashing, such as the storing of passwords	Before Revision☆☆☆☆☆ After Revision☆☆☆☆☆

Slideshow (Shared area)	PG Online Textbook	Teach-ICT	CraignDave (Youtube)
Slides 1 to 44 Read <input type="checkbox"/> Starter Activities <input type="checkbox"/> Tasks <input type="checkbox"/>	Section 4: Chapter 15 Pages 75 to 81 Read <input type="checkbox"/> Questions 1- 6 <input type="checkbox"/> Exercises P81 <input type="checkbox"/>	1.3.1 Compression & Encryption - Compression Theory <input type="checkbox"/> 1.3.1 Compression & Encryption - Encryption Theory <input type="checkbox"/> 1.3.1 Compression & Encryption - Hashing Theory <input type="checkbox"/>	OCR A'Level Lossy vs Lossless Watched <input type="checkbox"/> Cornell Notes <input type="checkbox"/> OCR A'Level Run length & dictionary coding Watched <input type="checkbox"/> Cornell Notes <input type="checkbox"/> OCR A'Level Symmetric & asymmetric encryption Watched <input type="checkbox"/> Cornell Notes <input type="checkbox"/> OCR A'Level Hashing Watched <input type="checkbox"/> Cornell Notes <input type="checkbox"/>