Huffman codes

A lossless compression algorithm that assigns shorter binary codes to more frequent symbols and longer codes to less frequent ones, optimizing the average code length.

RLE coding

A simple compression technique that encodes consecutive repeating characters or bits with a single symbol and a repetition count, reducing storage size for repetitive data patterns.

LZW coding

A lossless data compression algorithm that replaces repeated patterns in the input with shorter codes, dynamically builds a dictionary of substrings.

Multimedia compression

Covers lossy and lossless techniques used to reduce the size of multimedia files like images, audio, and video by discarding less perceptible data or optimizing storage efficiency.

Jpeg compression

A lossy image compression method that reduces file size by converting color spaces, applying a Discrete Cosine Transform (DCT), and using quantization and entropy coding.

Mpeg compression

A standard for compressing video and audio by reducing spatial and temporal redundancies, using frame types (I, P, B) and motion compensation for efficient storage and transmission.

Character encoding

Explains systems like ASCII, ANSI, ISO standards, and Unicode for representing characters in digital formats.

UTF-8 encoding

A variable-length encoding system that compresses Unicode characters into 1 to 6 bytes depending on the character range, ensuring compatibility with ASCII.

Base64 coding

A method for encoding binary data into text using 64 symbols, ensuring safe transmission of data in text-only formats like email or URLs. It's commonly used in MIME for email attachments.