Character encoding is a way to represent characters in a computer system, where each character is assigned a unique binary code. This allows the computer to understand and display text in various languages and formats.

A byte order mark (BOM) is a special marker placed at the beginning of a text file to indicate the encoding type used. For example, UTF-8 can be used with or without a BOM. When used with a BOM, it is easier to determine the encoding type of the file, while a file without a BOM can cause issues with incorrect interpretation of the text.

ASCII art is a form of art that uses characters and symbols from the ASCII encoding to create images and designs. For example, a simple ASCII art of a heart can be created using "<3" symbol.

HTML character entities are codes used in HTML to display special characters that are not easily represented using regular text. For example, "&lt;" is the HTML entity code for the less than sign "<".

The <pre> and <code> HTML tags are used to display preformatted text and code blocks respectively. They preserve white spaces and line breaks in the text, making them useful for displaying code snippets, ASCII art, or any text that needs to be displayed exactly as it was written. These tags are commonly used in programming tutorials, documentation, and displaying code examples on websites.

Type: ZIP is an archiver and compressor (all in one), while Gzip is only a compressor.

System functionality: ZIP compresses and packages multiple files/directories, whereas Gzip compresses only one file.

Compression algorithm: Both formats use the DEFLATE algorithm, but ZIP may be less efficient in compressing .

Speed: ZIP has slow compression and decompression compared to the faster compression and decompression of Gzip.

Archiving: ZIP can store file structure, comments, and encryption, while Gzip is limited to the compressed file itself.

Platform: ZIP is widely supported on Windows, macOS, Linux, and Gzip is mainly used on Unix and Linux systems, although support is available on other platforms.

Use cases: ZIP is convenient for sharing multiple files and preserving file structure, while Gzip is better suited for reducing the size of a single file for storage or transfer.