1. Character encoding is the process of assigning numbers to graphical characters (letters, symbols, emojis) so that computers can store, transmit, and transform them. Different character encodings allow computers to understand and display text correctly. It’s useful when dealing with various languages and scripts.
2. The Byte Order Mark (BOM) is a special Unicode character (a standardized encoding system for representing text in computers and other devices) placed at the start of a text stream. It serves three purposes:
   * 1. Indicates the byte order of the text (for 16-bit and 32-bit encodings).
     2. Confirms that the text stream uses Unicode encoding.
     3. Specifies which Unicode character encoding is used (e.g., UTF-8, UTF-16).
   * Difference Between UTF-8 with and without BOM:
     1. UTF-8 with BOM: Signals that the text is encoded in UTF-8 and helps identify the encoding. It’s optional but can be useful.
     2. UTF-8 without BOM: Still UTF-8, but without the extra BOM character. It’s more common and doesn’t affect the actual content.
3. ASCII art is a creative technique that uses characters from the ASCII standard to create visual images or designs. It’s like drawing pictures using letters, numbers, and symbols.

Example:

\_\_\_\_

/ \

| O O |

| ∆ |

\\_\_\_\_\_ /

1. HTML character entities are special codes used to display reserved characters in HTML. For example:
   * 1. &lt; represents the less than sign (<).
     2. &amp; represents the ampersand (&).

They prevent confusion with HTML tags and allow you to display characters that might otherwise be misinterpreted.

1. 1)<pre> Tag:
   * 1. Displays preformatted text exactly as written (preserves spaces and line breaks).
     2. Useful for showing code examples, poetry, or ASCII art.
        1. <code> Tag:
     3. Indicates a fragment of computer code.
     4. Typically used for inline code snippets within a sentence.
     5. Doesn’t preserve formatting like <pre>; it’s more for semantics.

The differences between GZIP and ZIP:

* ZIP is both an archiving and compression tool, meaning it can gather multiple files into one and compress them. It’s more common on Windows systems.
* GZIP is primarily a compression tool used on Unix-like systems. It compresses files but needs another tool like tar to archive them.

Feedback

In this laboratory work, I spent a long time figuring out how to correctly create a table with merging cells using colspan and rowspan, and yet the result turned out to be slightly different from what I expected