Markup languages are a way to annotate text to define the structure and presentation of documents. They consist of tags or codes embedded within the text, which provide instructions for how the text should be displayed or processed. Here are some popular markup languages:

HTML (Hypertext Markup Language):

- Purpose: Used for creating and structuring web pages.
- Example: This is a paragraph

XML (eXtensible Markup Language):

- Purpose: Designed to store and transport data, particularly for communication between different systems.
- Example: <book><title>Harry Potter</title><author>J.K. Rowling</author></book>

XHTML (eXtensible Hypertext Markup Language):

- Purpose: An XML-based version of HTML, designed to be more strict and compatible with XML rules.
- Example: This is a paragraph

Markdown:

- Purpose: Lightweight markup language often used for creating formatted text using a plain-text editor.
- Example: # Heading 1

LaTeX:

- Purpose: Used for document preparation and typesetting, especially in scientific and mathematical fields.
- Example: \section{Introduction}

SGML (Standard Generalized Markup Language):

- Purpose: A meta-language used for defining markup languages.
- Example: SGML itself is not used for specific document content but defines the rules for creating markup languages like HTML and XML.

YAML (YAML Ain't Markup Language):

- Purpose: Human-readable data serialization format, often used in configuration files.
- Example:
- yamlCopy code
- name: John Doe
- age: 30

JSON (JavaScript Object Notation):

- While not a traditional markup language, JSON is a lightweight data-interchange format often used for APIs and configuration files.

These languages provide a way to structure information, define relationships between elements, and control how content is displayed or processed. Each markup language serves a specific purpose, and the choice of which to use depends on the requirements of the task or project.