Some sources for our Java project to convert Chinese character to pinyin

Pinyin4j is a Java library that helps convert Chinese characters (Hanzi) into their corresponding Pinyin (the official Romanization system for Standard Mandarin). It is widely used in applications that require processing Chinese text or implementing features such as Chinese character sorting, searching, or input methods. This library is based on the Unicode Consortium's Unihan database, ensuring that it covers a wide range of Chinese characters.

GitHub repository: https://github.com/belerweb/pinyin4j

Key Features:

1. Supports multiple Pinyin output formats, including uppercase, lowercase, and capitalized.
2. Provides tone mark options, such as numeric tone marks (e.g., "ma3") or tone marks placed over the vowels (e.g., "mǎ").
3. Allows customization of the output format to cater to specific needs.
4. Supports both simplified and traditional Chinese characters.

Key Functions:

1. PinyinHelper class: The primary class for converting Chinese characters to Pinyin.

* **toHanyuPinyinStringArray(char ch)**: Returns a String array containing all possible Pinyin representations of a given Chinese character.
* **toHanyuPinyinStringArray(char ch, HanyuPinyinOutputFormat outputFormat)**: Returns a String array containing all possible Pinyin representations of a given Chinese character, formatted according to the specified output format.

1. HanyuPinyinOutputFormat class: Allows customization of the Pinyin output format.

* **setCaseType(HanyuPinyinCaseType caseType)**: Sets the case type for the output Pinyin (UPPERCASE, LOWERCASE, or CAPITALIZE\_FIRST\_LETTER).
* **setToneType(HanyuPinyinToneType toneType)**: Sets the tone type for the output Pinyin (WITH\_TONE\_NUMBER, WITHOUT\_TONE, or WITH\_TONE\_MARK).
* **setVCharType(HanyuPinyinVCharType vCharType)**: Sets the representation of the ü character (WITH\_U\_AND\_COLON, WITH\_V, or WITH\_U\_UNICODE).

1. HanyuPinyinCaseType enumeration: Represents different case types for the output Pinyin.

* **UPPERCASE**: Converts Pinyin to uppercase letters.
* **LOWERCASE**: Converts Pinyin to lowercase letters.
* **CAPITALIZE\_FIRST\_LETTER**: Capitalizes the first letter of each Pinyin syllable.

1. HanyuPinyinToneType enumeration: Represents different tone types for the output Pinyin.

* **WITH\_TONE\_NUMBER**: Represents Pinyin tones with numbers (e.g., "ma3").
* **WITHOUT\_TONE**: Outputs Pinyin without any tone marks or numbers (e.g., "ma").
* **WITH\_TONE\_MARK**: Represents Pinyin tones with diacritical marks over the vowels (e.g., "mǎ").

1. HanyuPinyinVCharType enumeration: Represents different representations of the ü character.

* **WITH\_U\_AND\_COLON**: Represents ü as "u:" (e.g., "lu:").
* **WITH\_V**: Represents ü as "v" (e.g., "lv").
* **WITH\_U\_UNICODE**: Represents ü using the Unicode character "ü" (e.g., "lü").