

## Syllable structure and reordering in Tai Viet

Reordering is an orthographic feature of many Southeast and South Asian scripts, including Tai Viet. A comparison of the oral and written syllable structures can help one understand the reordering process.

### *The oral syllable*

Orally, the syllable structure for languages which use the Tai Viet script consists of an initial consonant, a vowel, an optional final consonant, and a tone. If the initial consonant is a velar, it may be labialized. Words that appear to begin vowel-initial are analyzed as having an initial glotal stop. Thus, the phonetic order for the syllable is:

$$C_i (W) V (C_f) + T$$

(Note that the tone is a “suprasegmental”. It covers the entire syllable, and is not considered to have any order.)

### *The written syllable*

The written syllable structure varies, depending on the labialization of the initial consonant, what vowels are present, and what system is used for writing tone.

If an initial velar consonant is labialized, TAI VIET LETTER HIGH VO is written after it to indicate the labialization. Any combining vowel and tone marks are then moved from above/below the initial consonant to above/below the HIGH VO. Thus, the HIGH VO is treated as if it were a part of the initial consonant.

Most vowels consist of a single symbol, whose position relative to the initial consonant is determined by what the vowel is: It may be written as a combining mark above or below the initial consonant, or as a spacing letter before or after the initial consonant.

There are also several digraph vowels, which are written using a left side vowel plus an upper combining vowel, or a left side vowel plus a right side vowel.

Combining tones and spacing tones represent two independent systems for marking tones. They are not generally mixed in the same document. The tone does not need to be marked on every syllable. See “Tone Marking in Tai Viet”.

Thus, the patterns representing the written syllable can be represented with the following chart:

	Syllable without labialized initial consonant	Syllable with labialized initial consonant.
Using combining tone marks	$\begin{matrix} (T_u) \\ V_u \\ V_1 & C_i & V_r & (C_f) \\ V_b \end{matrix}$	$\begin{matrix} (T_u) \\ V_u \\ V_1 & C_i & W & V_r & (C_f) \\ V_b \end{matrix}$
Using spacing tone marks	$\begin{matrix} V_u \\ V_1 & C_i & V_r & (C_f) & (T_s) \\ V_b \end{matrix}$	$\begin{matrix} V_u \\ V_1 & C_i & W & V_r & (C_f) & (T_s) \\ V_b \end{matrix}$

where:

$C_i$  = the initial consonant

$W$  = TAI VIET LETTER HIGH VO, used to mark an initial labialized velar consonant

$V_l$  = a left side vowel

$V_r$  = a right side vowel

$V_u$  = an upper combining vowel mark

$V_b$  = a bottom combining vowel mark

$C_f$  = an optional final consonant

$T_u$  = an optional upper combining tone mark

$T_s$  = an optional spacing tone

Left side vowels include:

character	Unicode name	Tai Dam phonemic value	Tai Don phonemic value
ⵇ	TAI VIET VOWEL E	/ɛ/	/ɛ/
ⵈ	TAI VIET VOWEL O	/o/	/o/
ⵉ	TAI VIET VOWEL UEA	/iə/	—
ⵊ	TAI VIET VOWEL AUE	/əw/	/əw/
ⵋ	TAI VIET VOWEL AY	/aj/	/aj/

Right side vowels include:

character	Unicode name	Tai Dam phonemic value	Tai Don phonemic value
◌ɔ	TAI VIET VOWEL AA	/a:/	/a:/
◌ɤ	TAI VIET VOWEL UA	/uə/	—
◌ɤ̃	TAI VIET VOWEL AN	/an/	/an/
◌ə	TAI VIET LETTER LOW O	/ɔ/	/ɔ/

Upper combining vowel marks include:

character	Unicode name	Tai Dam phonemic value	Tai Don phonemic value
◌̌	TAI VIET MAI KANG	/a/	/a/
◌̆	TAI VIET VOWEL I	/i/	/i/
◌̇	TAI VIET VOWEL UE	/i/	/i/
◌̈	TAI VIET MAI KHIT	/ɔ/ or /a/	/ə/
◌̉	TAI VIET VOWEL IA	/iə/	/e/
◌̊	TAI VIET VOWEL AM	/am/	/am/

Bottom combining vowels include:

character	Unicode name	Tai Dam phonemic value	Tai Don phonemic value
◌̋	TAI VIET VOWEL U	/u/	/u/

Digraph vowels include:

character	Unicode name	Tai Dam phonemic value	Tai Don phonemic value
᩠ᩣ᩠	TAI VIET VOWEL UEA + TAI VIET VOWEL IA	/e/	—
᩠ᩣ᩠᩠	TAI VIET VOWEL UEA + TAI VIET MAI KHIT	/ə/	—
᩠ᩣ᩠᩠᩠	TAI VIET VOWEL UEA + TAI VIET VOWEL AA	/aw/	/aw/