

**SRI LANKA STANDARD 1134 : PART 1 : 2006**  
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**SINHALA CHARACTER CODE FOR  
INFORMATION INTERCHANGE  
PART 1 : COLLATION SEQUENCE**

**SRI LANKA STANDARDS INSTITUTION**



**Sri Lanka Standard**  
**SINHALA CHARACTER CODE FOR INFORMATION INTERCHANGE**  
**PART 1 : COLLATION SEQUENCE**

**SLS 1134 : Part 1 : 2006**  
**(incorporating Amendment No.1)**

**Gr. 4**

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**Sri Lanka Standard**  
**SINHALA CHARACTER CODE FOR INFORMATION INTERCHANGE**  
**PART 1 : COLLATION SEQUENCE**

## **FOREWORD**

This standard was approved by the Sectoral Committee on Information Technology and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2006-10-25.

This standard should be read in conjunction with **SLS1134** : Sinhala character code for information interchange.

Sinhala collation is based on the order of Indic letters derived from Sanskrit, but has evolved its own conventions over the years. The dictionaries and other reference works which have been published since the 19th Century AD agree on these basic Sinhala collation sequence, but disagree in details.

A collation sequence is needed to set up data bases and other collections of information in Sinhala. Consequently the Information and Communication Technology Agency of Sri Lanka (ICTA) requested the University of Colombo School of Computing (UCSC) to recommend a suitable collation algorithm. This standard was developed based on the recommendations made by the UCSC, as modified by the ICTA.

In the preparation of this standard, the assistance provided by ICTA is gratefully acknowledged.

## **1. SCOPE**

This standard prescribes the collation sequence for arranging a list of words or phrases in the Sinhala language.

## **2. DEFINITIONS**

**2.1 collation:** Collation is the process of arranging a list of words or phrases in a standard order.

## **3. COLLATION SEQUENCE**

This standard defines a dictionary collation sequence for use in compiling dictionaries and other scholarly works and a simple collation sequence for use in data processing and other activities on lists of personal and other names.

### 3.1 Dictionary collation sequence

The Dictionary collation is the canonical collation order, and should be used when correct collation, based on the linguistic derivation of Sinhala, is required, e.g for a dictionary. This collation is recommended for use in scholarly and academic activities.

### 3.2 Simple collation sequence

The Simple collation should be used for preparing lists of names, places etc, and would produce identical results as the dictionary collation sequence when collating personal name, place names and other common data. This collation is recommended for use in collating lists of names, locations, etc.

The two collations will produce different results only between words with the letter ජ or ක්, and the letter ඥ in a given position.

The Simple collation is both easier to implement, thus encouraging vendors to support Sinhala in their products, and produces a result which will not confuse a person who is not aware of the subtleties of the language.

It is recommended that implementations which only support a single collation sequence support the Simple collation sequence.

## 4 COLLATION ALGORITHM

The collation algorithm is based on syllables. A syllable may consist of a:

- i) vowel, e.g. අ, ඔ, ට,
- ii) pure consonant, e.g. ක්, ල්,
- iii) consonant combined with a vowel, e.g. ක, කා, කැ, කෑ, ..... කො, ... ග, ගා,...
- iv) semi-consonant, e.g. ශ්, ං:

### 4.1 The Dictionary collation algorithm

The text to be collated is first decomposed using the following rules:

- a) Conjunct letters (බැඳි අකුරු) are decomposed into the equivalent <pure consonant, consonant-with-vowel> sequence e.g. ක්ෂ->ක්ෂේ.
- b) Touching letters are decomposed into the equivalent <pure consonant, consonant-with-vowel> sequence e.g. සි -> සිව්, මම -> මිම.
- c) The yansaya and rakaransaya are decomposed into their equivalent forms e.g:කාය -> කිය and කු-> කිර.
- d) The repaya is decomposed in its equivalent form e.g.ඕ ->ඊම.
- e) The letter ඥ is decomposed as follows:

ඥ->ජ්ඤ.

Thus, ඥාන is collated as being equivalent to ජ්ඤාන.

NOTE : *If words with both the composed and decomposed form are collated, the decomposed form should appear before the composed form.*



## 4.2 The Simple collation algorithm

The algorithm for the Simple collation is the same as for the Dictionary collation sequence, except that the decomposition in step d) of 4.1 is omitted. Therefore, ෙ is not decomposed into ඒෑ but treated as a single letter.

### NOTES:

1. The vowels ඔ and ඕ (ilu, iluu) and their modifiers ො and ෝ do not occur in Sinhala words. However, they are included in the collation sequence.

2. Not all of the above syllables occur in Sinhala but are listed for completeness as words with such combinations may, though incorrect, appear in text to be collated.

For example, the vowels ඇ, ඈ are not found in Sanskrit, and would never modify ෙ. Also, the vowels සා, සාආ would never modify ඔ or ඕ. Inclusion in the above listing does not imply that such combinations are valid.

3. The decomposition specified in 4.1 a) to e) is only for the purpose of determining the collation order. The actual text will not be decomposed, and will appear in the correct Sinhala representation.

4. Combinations of letters with the yansaya, rakaransaya an repaya do not appear in the above list, as they are decomposed in steps c) and d).

5. The sound “ru” may be written either as in සාඤ or in ඉච්ඤ depending on the origin of the word. These two constructs are collated differently, based on their composition, as consonant + සා and consonant + <sup>ථ</sup> + ඉ + ජ respectively.

Loan words such as ඉච්ඤ containing the sound ඇ are collated as consonant + <sup>ථ</sup> + ඉ + ඇ.

The long versions of these vowel modifiers are treated similarly.

6. The characters ෙ and ෙ are interchanged in the above list when compared with the Unicode code-point order. This is relevant only in the Simple collation, as the letter ෙ is decomposed when performing the Dictionary collation.

7. The Kundaliya ඌ is not included in these algorithms, but should be collated before all the letters.

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