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# Request to Allocate the Sharada Script in the Unicode Roadmap

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#### **I** Introduction

This is a request to allocate the Sharada script in the Unicode Roadmap. The Sharada script is a major historical Brahmi-based script of South Asia and it was the principal script of Kashmir until the 20th century. Sharada was used extensively between the 10th and 17th centuries CE for the production of Vedic and classical Sanskrit manuscripts. Metal types for Sharada were introduced in the 19th century CE for printing educational primers and pamphlets. It continued as a medium for instruction well into the 20th century CE; however in the 1950s, an extended Perso-Arabic script was established as the official script for Kashmiri, which contributed to the decline of Sharada. Presently, Sharada is used by the Kashmiri Pandit community for traditional scholarship, manuscript production, and religious and ceremonial purposes.

It is recommended that the Sharada script be included in the Supplementary Multilingual Plane (Plane 1). Based on the history and use of the script, Sharada could be classified as a "Category C" (major extinct) script. However, its employment by the Kashmiri Pandit community represents a specialized use of the script, which would qualify it as "Category B.I" (specialized) script. Once Sharada is allocated to the Supplementary Multilingual Plane, a final determination will be made through additional research and clarified in a formal proposal to encode the script in Unicode.

## 2 Letters of the Sharada Script

A glyph chart for Sharada is presented in table 1. The letters in this chart are from a digital Sharada font drawn by the author of this request. A list of character names is given in table 2. Figure 1 contains a table of the Sharada script, and figures 2 and 3 show specimens of hand-written Sharada.

Based on an initial estimate, the Sharada script will require a minimum of 82 code-points, consisting of

Vowels: 14 letters Vowel signs: 13 signs Consonants: 34 letters

• Signs: 4 (anusvāra, candrabindu, visarga, avagraha)

• Special signs: 3 (Sharada *virāma*, *jihvamulīya*, *upadhmanīya*)

Punctuation: 2 (dandā and double dandā)
Special symbols: 2 (Sharada om and ekam)

• Digits: 10

Further research may uncover other signs, symbols, and punctuation used in Sharada manuscripts. In order to accommodate characters not accounted for in the above tabulation, Sharada should be allocated 96 codepoints (6 rows) in the Roadmap.

#### 2.1 Relationship to Other Scripts

The Sharada script shares structural affinity to major scripts like Devanagari and Gurmukhi, as well as to minor regional scripts like Takari. However, the overall appearance of Sharada letters is quite different from those of Devanagari and Gurmukhi. The most distinctive features of Sharada are *virāma* and the digits. While functionally the same as in Devanagari, in Sharada, *virāma* follows the consonant immediately to the right, attaching to the top-line, instead of below the consonant. Sharada digits are modeled after the decimal system, however, the notation system is most unique in the use of a dot for zero and a circle for one.

### 3 Bibliography

Grierson, George A. 1919 [1968]. *Linguistic Survey of India*. Volume VIII. Part. II. Indo-Aryan Family, North-Western Group, Dardic or Piśācha Languages (Including Kāshmīrī). Reprint. Delhi: Motilal Banarsidass.

Śākyavamśa, Hemarāja. 1974 [samvat 2030]. Nepāla lipi-prakāśa. Kathamandau.

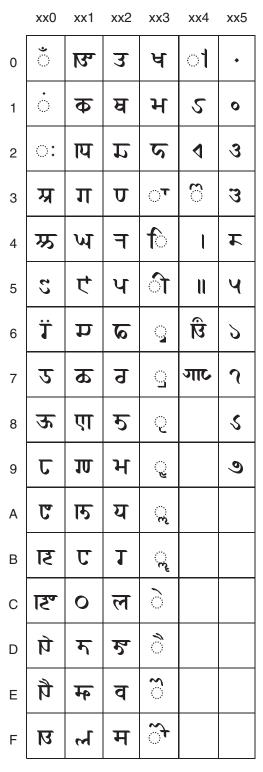


Table 1: Prelimary glyph chart for Sharada

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xx00; SHARADA SIGN CANDRABINDU
                                         xx2A; SHARADA LETTER YA
xx01;SHARADA SIGN ANUSVARA
                                        xx2B;SHARADA LETTER RA
xx02;SHARADA SIGN VISARGA
                                       xx2C;SHARADA LETTER LA
xx03;SHARADA LETTER A
                                        xx2D;SHARADA LETTER LLA
xx04; SHARADA LETTER AA
                                         xx2E; SHARADA LETTER VA
xx05;SHARADA LETTER I
                                         xx2F;SHARADA LETTER SHA
xx06; SHARADA LETTER II
                                        xx30; SHARADA LETTER SSA
xx07;SHARADA LETTER U
                                         xx31; SHARADA LETTER SA
xx08;SHARADA LETTER UU
                                         xx32; SHARADA LETTER HA
xx00;SHARADA LETTER VOCALIC R
                                       xx33;SHARADA VOWEL SIGN AA
                                        xx34;SHARADA VOWEL SIGN I
xx0A; SHARADA LETTER VOCALIC RR
xx0B;SHARADA LETTER VOCALIC L
                                         xx35;SHARADA VOWEL SIGN II
xx0C;SHARADA LETTER VOCALIC LL
                                         xx36; SHARADA VOWEL SIGN U
xx0D;SHARADA LETTER E
                                         xx37; SHARADA VOWEL SIGN UU
xx0E; SHARADA LETTER AI
                                         xx38; SHARADA VOWEL SIGN VOCALIC R
xx0F;SHARADA LETTER O
                                         xx39; SHARADA VOWEL SIGN VOCALIC RR
                                         xx3A; SHARADA VOWEL SIGN VOCALIC L
xx10; SHARADA LETTER AU
xx11; SHARADA LETTER KA
                                         xx3B; SHARADA VOWEL SIGN VOCALIC LL
xx12; SHARADA LETTER KHA
                                         xx3C; SHARADA VOWEL SIGN E
xx13; SHARADA LETTER GA
                                         xx3D; SHARADA VOWEL SIGN AI
xx14; SHARADA LETTER GHA
                                         xx3E; SHARADA VOWEL SIGN O
xx15; SHARADA LETTER NGA
                                         xx3F;SHARADA VOWEL SIGN AU
xx16; SHARADA LETTER CA
                                         xx40; SHARADA SIGN VIRAMA
xx17; SHARADA LETTER CHA
                                         xx41; SHARADA SIGN AVAGRAHA
xx18;SHARADA LETTER JA
                                         xx42; SHARADA SIGN JIHVAMULIYA
xx19; SHARADA LETTER JHA
                                         xx43; SHARADA SIGN UPADHMANIYA
xx1A; SHARADA LETTER NYA
                                         xx44; SHARADA DANDA
                                         xx45; SHARADA DOUBLE DANDA
xx1B; SHARADA LETTER TTA
xx1C; SHARADA LETTER TTHA
                                         xx46; SHARADA SYMBOL OM
xx1D; SHARADA LETTER DDA
                                         xx47; SHARADA SYMBOL EKAM
                                         xx50;SHARADA DIGIT ZERO
xx1E; SHARADA LETTER DDHA
xx1F; SHARADA LETTER NNA
                                         xx51; SHARADA DIGIT ONE
xx20; SHARADA LETTER TA
                                         xx52; SHARADA DIGIT TWO
xx21; SHARADA LETTER THA
                                         xx53; SHARADA DIGIT THREE
xx22; SHARADA LETTER DA
                                         xx54; SHARADA DIGIT FOUR
xx23;SHARADA LETTER DHA
                                         xx55;SHARADA DIGIT FIVE
xx24; SHARADA LETTER NA
                                         xx56; SHARADA DIGIT SIX
xx25;SHARADA LETTER PA
                                         xx57; SHARADA DIGIT SEVEN
xx26;SHARADA LETTER PHA
                                         xx58; SHARADA DIGIT EIGHT
xx27; SHARADA LETTER BA
                                         xx59; SHARADA DIGIT NINE
xx28; SHARADA LETTER BHA
xx29; SHARADA LETTER MA
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Table 2: Prelimary character names for Sharada

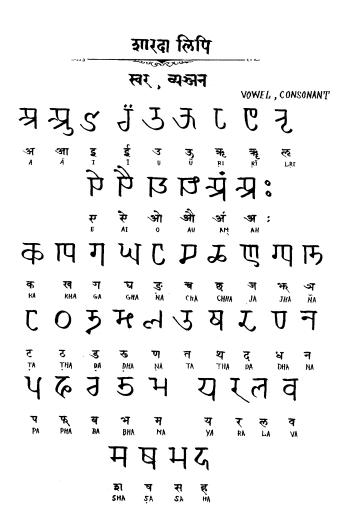


Figure 1: Inventory of Sharada letters (Śākyavaṃśa 1974: 62).

मिका मेठिनिवा संस्क्ति हिस्सि हिस्सि हिस्सि से हिस्सि हिस्सि से लिमा कि के मिल प्र मिका मन्क िम् यमा प्रवादि । उव यउ उंसि दिक्सि विद्या प्रवादि । उव यउ उंसि दिक्सि विद्या हिस्सि विद्या हिस्सि । केंग् इत्वा यउ सका केंग् विद्या गिक्सा गिका मिमा भाष-दिवा । उदि उंसि नका हिमा प्रा मीममा भाष-दिवा । उदि उंसि नका हिमा प्रा मिमा प्रवा स्वा । उदि उंसि मेंग्या मन विद्या मिमा विद्या कि ना मूगा मुजा मन विद्या हिमा मुगा मुजा-दि हिम्ना हुना मयहना । उव यउ मुका गिकिषा उमि मीमिकिमा । उव यउ मुका गिकिषा उमि मीमिकिमा निम दुस्, उंसि यनि गामका विवा कि मिगा कि मिगा हिमा हिमा । उदि उंसि मेंग्ना-कंसि

Figure 2: Specimen of Sharada written by Mahāmahopādhāya Paṇḍit Mukund Rām Śāstrī in 1896 for the Linguistic Survey of India (Grierson 1919: 317). The specimen illustrates the use of special marks that resemble Devanagari svarita and virāma. These marks were used by Śāstrī to indicate changes in vowel quality in the Kashmiri language that is not typically represented in Sharada orthography. The marks bear no similarity to their function in Devanagari and are not formally part of the Sharada script. The Sharada virāma (code point xx40 in table 1) differs from Devanagari virāma and is represented, for instance, by the sign that follows the last letter, sa, in the first word, akis. The use of svarita-like and virāma-like marks in the third word, asi, are used to mark the pronunciation of the word as ösi. The specimen is continued in figure 3.

Figure 3: Specimen of hand-written Sharada, continued from figure 2 (Grierson 1919: 318).