

Title: Preliminary Proposal to Encode Indic Siyaq Numbers in the UCS
Source: Script Encoding Initiative (SEI)
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1 Introduction

This is a proposal to encode Indic Siyaq Numbers in the Universal Character Set (ISO/IEC 10646). This document draws upon information originally presented in “Raqm Numerals: A Model for Encoding the Siyaq System of South Asia” (N4117 L2/09-148). Please refer to N4117 for more information on the origins of the characters, the notation system, and specimens.

This proposal is to be reviewed in conjunction with the following documents:

- N4122 L2/11-269: Preliminary Proposal to Encode Diwani Siyaq Numbers in the UCS
- N4124 L2/11-271: Preliminary Proposal to Encode Ottoman Siyaq Numbers in the UCS
- N4125 L2/11-272: Preliminary Proposal to Encode Persian Siyaq Numbers in the UCS

2 Proposal Details

2.1 Name and Allocation

The proposed characters belong to a block to be named ‘Indic Siyaq Numbers’. It was previously referred to as ‘Raqm Numerals’. The characters are to be encoded in the SMP at U+1ED00..1ED4F, which is allocated for left-to-right scripts.

2.2 Encoding Model

The most practical model for Indic Siyaq Numbers is to encode characters for each number of the primary, tens, hundreds, thousands, and ten-thousands units, as well as combining number forms, unit-multipliers, and unit-specific marks (see N4117 for discussion of alternate models).

2.3 Characters Proposed

The following characters are proposed for encoding:

- *Primary numbers* 9 characters:

١	INDIC SIYAQ NUMBER ONE
٢	INDIC SIYAQ NUMBER TWO
٣	INDIC SIYAQ NUMBER THREE
٤	INDIC SIYAQ NUMBER FOUR

٥	INDIC SIYAQ NUMBER FIVE
٦	INDIC SIYAQ NUMBER SIX
٧	INDIC SIYAQ NUMBER SEVEN
٨	INDIC SIYAQ NUMBER EIGHT
٩	INDIC SIYAQ NUMBER NINE

• *Tens* 9 characters:

١٠	INDIC SIYAQ NUMBER TEN
٢٠	INDIC SIYAQ NUMBER TWENTY
٣٠	INDIC SIYAQ NUMBER THIRTY
٤٠	INDIC SIYAQ NUMBER FORTY
٥٠	INDIC SIYAQ NUMBER FIFTY
٦٠	INDIC SIYAQ NUMBER SIXTY
٧٠	INDIC SIYAQ NUMBER SEVENTY
٨٠	INDIC SIYAQ NUMBER EIGHTY
٩٠	INDIC SIYAQ NUMBER NINETY

• *Hundreds* 9 characters:

١٠٠	INDIC SIYAQ NUMBER ONE HUNDRED
٢٠٠	INDIC SIYAQ NUMBER TWO HUNDRED
٣٠٠	INDIC SIYAQ NUMBER THREE HUNDRED
٤٠٠	INDIC SIYAQ NUMBER FOUR HUNDRED
٥٠٠	INDIC SIYAQ NUMBER FIVE HUNDRED
٦٠٠	INDIC SIYAQ NUMBER SIX HUNDRED
٧٠٠	INDIC SIYAQ NUMBER SEVEN HUNDRED
٨٠٠	INDIC SIYAQ NUMBER EIGHT HUNDRED
٩٠٠	INDIC SIYAQ NUMBER NINE HUNDRED

• *Thousands* 9 characters:

١٠٠٠	INDIC SIYAQ NUMBER ONE THOUSAND
٢٠٠٠	INDIC SIYAQ NUMBER TWO THOUSAND
٣٠٠٠	INDIC SIYAQ NUMBER THREE THOUSAND
٤٠٠٠	INDIC SIYAQ NUMBER FOUR THOUSAND
٥٠٠٠	INDIC SIYAQ NUMBER FIVE THOUSAND
٦٠٠٠	INDIC SIYAQ NUMBER SIX THOUSAND
٧٠٠٠	INDIC SIYAQ NUMBER SEVEN THOUSAND
٨٠٠٠	INDIC SIYAQ NUMBER EIGHT THOUSAND
٩٠٠٠	INDIC SIYAQ NUMBER NINE THOUSAND

• *Tens Thousands* 9 characters:

١٠٠٠٠	INDIC SIYAQ NUMBER TEN THOUSAND
٢٠٠٠٠	INDIC SIYAQ NUMBER TWENTY THOUSAND
٣٠٠٠٠	INDIC SIYAQ NUMBER THIRTY THOUSAND
٤٠٠٠٠	INDIC SIYAQ NUMBER FORTY THOUSAND
٥٠٠٠٠	INDIC SIYAQ NUMBER FIFTY THOUSAND
٦٠٠٠٠	INDIC SIYAQ NUMBER SIXTY THOUSAND

م	INDIC SIYAQ NUMBER SEVENTY THOUSAND
ل	INDIC SIYAQ NUMBER EIGHTY THOUSAND
ن	INDIC SIYAQ NUMBER NINETY THOUSAND

- *Hundred Thousands* 3 characters:

لکھ	INDIC SIYAQ NUMBER ONE HUNDRED THOUSAND
لکھاں	INDIC SIYAQ NUMBER TWO HUNDRED THOUSAND
لک	INDIC SIYAQ HUNDRED THOUSANDS MARK

- *Ten Millions* 2 characters:

کروڑ	INDIC SIYAQ TEN MILLIONS MARK
کروڑاں	INDIC SIYAQ NUMBER TWENTY MILLION

- *Combining Numbers* 9 characters:

۱	INDIC SIYAQ COMBINING NUMBER ONE
۲	INDIC SIYAQ COMBINING NUMBER TWO
۳	INDIC SIYAQ COMBINING NUMBER THREE
۴	INDIC SIYAQ COMBINING NUMBER FOUR
۵	INDIC SIYAQ COMBINING NUMBER FIVE
۶	INDIC SIYAQ COMBINING NUMBER SIX
۷	INDIC SIYAQ COMBINING NUMBER SEVEN
۸	INDIC SIYAQ COMBINING NUMBER EIGHT
۹	INDIC SIYAQ COMBINING NUMBER NINE
۲۰	INDIC SIYAQ COMBINING NUMBER TWENTY
۸۰	INDIC SIYAQ COMBINING NUMBER EIGHTY

- *Fractions* 3 characters:

¼	INDIC SIYAQ FRACTION ONE QUARTER
½	INDIC SIYAQ FRACTION ONE HALF
¾	INDIC SIYAQ FRACTION THREE QUARTERS

- *Currency signs* 1 character:

₹	INDIC SIYAQ RUPEE MARK
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2.4 Character Names

Names for the Indic Siyaq Numbers are assigned to reflect numeric values.

3 The Notation System

3.1 Structure

Indic Siyaq Numbers represent units of a decimal positional system. The notation system is additive; the value of a numerical sequence is the sum of the values of the numbers that constitute it. There is no character for zero, which is inherent in the independent numbers for each decimal order.

3.2 Directionality

The numbers are written right-to-left in the regular manner of the Arabic script, which differs from the left-to-right directionality of the Arabic-Indic digits.

3.3 Orthography

Indic Siyaq Numbers are written according to the rules for expressing numbers in Arabic, as well as in Urdu.

- *Independent Numbers* The primary, tens, hundreds, thousands, and ten-thousands orders are written using independent numbers. Higher decimal orders are represented using either independent numbers or sequences of numbers:
 1. *Hundred thousands* Expressed as ‘one .. nine lakhs’. There are distinct characters for لکھ ONE HUNDRED THOUSAND and کھل TWO HUNDRED THOUSAND. The remaining numbers are written using regular THREE .. NINE followed by لک HUNDRED THOUSANDS MARK, eg. 300,000 لکے.
 2. *Primary millions* Expressed as ‘ten .. ninety lakhs’. The primary millions are written using the combining form of the primary numbers, and the combining forms of TWENTY and EIGHTY, followed by لک HUNDRED THOUSANDS MARK, eg. 3,000,000 لکے. See Section 3.5 for details.
 3. *Ten millions* Expressed as ‘one .. nine karor’. 10,000,000 is written using the sequence <ر COMBINING NUMBER ONE + کور TEN MILLIONS MARK>, eg. ر کور. 20,000,000 is written using the distinct character کورل TWENTY MILLION. All other values are indicated using the regular numbers THREE .. NINE followed by کور TEN MILLIONS MARK, eg. 30,000,000 لکے کور.
- *Composite Numbers* Composite numbers are written in two ways:
 1. The combining forms of the primary numbers, and certain tens (TWENTY and EIGHTY), are used in composite numbers of the same decimal order. The numbers are transposed, with the primary number written before the larger numeral. This rule governs the writing of numbers such as 11 لکے, 12 لکے, 13 لکے, ..., 11,000 لکے, 12,000 لکے, 13,000 لکے, ..., etc.
 2. The independent form of the primary number is used in composite numbers of different decimal orders. The numbers are written in the regular order with the larger number preceding the primary number. This rule governs the writing of numbers such as 101 مائے, 102 مائے, 103 مائے, ..., 1,001 مائے, 1,002 مائے, 1,003 مائے, ..., 1,100 مائے, 1,200 مائے, 1,300 مائے, ..., etc.
- *Fractions* There are three signs for representing fractions: - ONE QUARTER, • ONE HALF, ÷ THREE QUARTERS. The fraction signs are written after numbers: 1¼ مائے.

- **Placeholder Mark** The [ۛ] PLACEHOLDER MARK indicates the absence of numbers. It is written with the thousands and ten thousands when they appear in isolation, eg. 5,000 [ۛ], 50,000 [ۛ].
- **Currency Sign** The / RUPEE MARK is used for currency notation. It represents the rupee and its sub-units, such as the ^آ *ānā* and ^{پائی} *pāī*. The mark is written after a number: Rs. 50 [ۛ]. The *ānā* is written using Arabic-Indic digits: As. 5 [ۛ]. The *pāī* is written using fractions: Ps. 1 [ۛ].

3.4 Rendering

Certain sequences of Indic Siyaq Numbers have special rendering requirements:

1. **Combining Forms** Combining forms are positioned below the following number. The location is dependent upon the shape of the combining number, eg. 11 [ۛ], 15 [ۛ], 16 [ۛ].
2. **Hundreds** When hundreds are written with thousands, the character for the hundreds is placed within the bowl of the thousands: 1,500 [ۛ], 1,900 [ۛ], 15,500 [ۛ].

3.5 Notes on Proposed Characters

The Indic Siyaq system has combining forms for the primary units and tens. Combining forms of the primary units are used for writing composite numbers:

[ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ]

The combining forms of tens are used in writing millions, which are expressed as ‘tens of lakhs’:



[ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ] [ۛ]

Several combining forms for the tens are graphically identical to that of the corresponding primary unit:

Primary	Tens	Primary	Tens	Primary	Tens
1	[ۛ]	4	[ۛ]	7	[ۛ]
2	[ۛ]	5	[ۛ]	8	[ۛ]
3	[ۛ]	6	[ۛ]	9	[ۛ]

Distinct combining forms for the primary and tens exist for multiples of 1, 2, 8. Compare 11 [ۛ] and ‘10 lakh’ [ۛ]; 22 [ۛ] and ‘20 lakh’ [ۛ]; 88 [ۛ] and ‘80 lakh’ [ۛ]. Note that the combining form of TEN is graphically identical to [ۛ] COMBINING NUMBER TWO.

Only the graphically distinct combining forms have been proposed for encoding. This consists of the full set of combining forms for the primary units, but only two combining forms for the tens: [ۛ] COMBINING NUMBER TWENTY and [ۛ] COMBINING NUMBER EIGHTY. With this model COMBINING NUMBER THREE .. COMBINING NUMBER SEVEN and COMBINING NUMBER NINE are used for representing both primary units and tens, COMBINING NUMBER TWENTY and COMBINING NUMBER EIGHTY are used distinctively, and COMBINING NUMBER TWO is used for combining ten.

The drawback to using combining forms of the primary units for also representing tens is that the identity of the number is known only through context and not through character semantics. For instance, the  COMBINING NUMBER TWO in the number  represents ‘10’ visually, but has the decimal value ‘2’ as specified in its properties.

3.6 Character Properties

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1ED01;INDIC SIYAQ NUMBER ONE;No;0;AN;;;1;N;;;;;
1ED02;INDIC SIYAQ NUMBER TWO;No;0;AN;;;2;N;;;;;
1ED03;INDIC SIYAQ NUMBER THREE;No;0;AN;;;3;N;;;;;
1ED04;INDIC SIYAQ NUMBER FOUR;No;0;AN;;;4;N;;;;;
1ED05;INDIC SIYAQ NUMBER FIVE;No;0;AN;;;5;N;;;;;
1ED06;INDIC SIYAQ NUMBER SIX;No;0;AN;;;6;N;;;;;
1ED07;INDIC SIYAQ NUMBER SEVEN;No;0;AN;;;7;N;;;;;
1ED08;INDIC SIYAQ NUMBER EIGHT;No;0;AN;;;8;N;;;;;
1ED09;INDIC SIYAQ NUMBER NINE;No;0;AN;;;9;N;;;;;
1ED0A;INDIC SIYAQ NUMBER TEN;No;0;AN;;;10;N;;;;;
1ED0B;INDIC SIYAQ NUMBER TWENTY;No;0;AN;;;20;N;;;;;
1ED0C;INDIC SIYAQ NUMBER THIRTY;No;0;AN;;;30;N;;;;;
1ED0D;INDIC SIYAQ NUMBER FORTY;No;0;AN;;;40;N;;;;;
1ED0E;INDIC SIYAQ NUMBER FIFTY;No;0;AN;;;50;N;;;;;
1ED0F;INDIC SIYAQ NUMBER SIXTY;No;0;AN;;;60;N;;;;;
1ED10;INDIC SIYAQ NUMBER SEVENTY;No;0;AN;;;70;N;;;;;
1ED11;INDIC SIYAQ NUMBER EIGHTY;No;0;AN;;;80;N;;;;;
1ED12;INDIC SIYAQ NUMBER NINETY;No;0;AN;;;90;N;;;;;
1ED13;INDIC SIYAQ NUMBER ONE HUNDRED;No;0;AN;;;100;N;;;;;
1ED14;INDIC SIYAQ NUMBER TWO HUNDRED;No;0;AN;;;200;N;;;;;
1ED15;INDIC SIYAQ NUMBER THREE HUNDRED;No;0;AN;;;300;N;;;;;
1ED16;INDIC SIYAQ NUMBER FOUR HUNDRED;No;0;AN;;;400;N;;;;;
1ED17;INDIC SIYAQ NUMBER FIVE HUNDRED;No;0;AN;;;500;N;;;;;
1ED18;INDIC SIYAQ NUMBER SIX HUNDRED;No;0;AN;;;600;N;;;;;
1ED19;INDIC SIYAQ NUMBER SEVEN HUNDRED;No;0;AN;;;700;N;;;;;
1ED1A;INDIC SIYAQ NUMBER EIGHT HUNDRED;No;0;AN;;;800;N;;;;;
1ED1B;INDIC SIYAQ NUMBER NINE HUNDRED;No;0;AN;;;900;N;;;;;
1ED1C;INDIC SIYAQ NUMBER ONE THOUSAND;No;0;AN;;;1000;N;;;;;
1ED1D;INDIC SIYAQ NUMBER TWO THOUSAND;No;0;AN;;;2000;N;;;;;
1ED1E;INDIC SIYAQ NUMBER THREE THOUSAND;No;0;AN;;;3000;N;;;;;
1ED1F;INDIC SIYAQ NUMBER FOUR THOUSAND;No;0;AN;;;4000;N;;;;;
1ED20;INDIC SIYAQ NUMBER FIVE THOUSAND;No;0;AN;;;5000;N;;;;;
1ED21;INDIC SIYAQ NUMBER SIX THOUSAND;No;0;AN;;;6000;N;;;;;
1ED22;INDIC SIYAQ NUMBER SEVEN THOUSAND;No;0;AN;;;7000;N;;;;;
1ED23;INDIC SIYAQ NUMBER EIGHT THOUSAND;No;0;AN;;;8000;N;;;;;
1ED24;INDIC SIYAQ NUMBER NINE THOUSAND;No;0;AN;;;9000;N;;;;;
1ED25;INDIC SIYAQ NUMBER TEN THOUSAND;No;0;AN;;;10000;N;;;;;
1ED26;INDIC SIYAQ NUMBER TWENTY THOUSAND;No;0;AN;;;20000;N;;;;;
1ED27;INDIC SIYAQ NUMBER THIRTY THOUSAND;No;0;AN;;;30000;N;;;;;
1ED28;INDIC SIYAQ NUMBER FORTY THOUSAND;No;0;AN;;;40000;N;;;;;
1ED29;INDIC SIYAQ NUMBER FIFTY THOUSAND;No;0;AN;;;50000;N;;;;;
1ED2A;INDIC SIYAQ NUMBER SIXTY THOUSAND;No;0;AN;;;60000;N;;;;;
1ED2B;INDIC SIYAQ NUMBER SEVENTY THOUSAND;No;0;AN;;;70000;N;;;;;
1ED2C;INDIC SIYAQ NUMBER EIGHTY THOUSAND;No;0;AN;;;80000;N;;;;;
1ED2D;INDIC SIYAQ NUMBER NINETY THOUSAND;No;0;AN;;;90000;N;;;;;
1ED2E;INDIC SIYAQ NUMBER ONE HUNDRED THOUSAND;No;0;AN;;;100000;N;;;;;
1ED2F;INDIC SIYAQ NUMBER TWO HUNDRED THOUSAND;No;0;AN;;;200000;N;;;;;
1ED30;INDIC SIYAQ HUNDRED THOUSANDS MARK;No;0;AN;;;100000;N;;;;;
1ED31;INDIC SIYAQ TEN MILLIONS MARK;No;0;AN;;;1000000;N;;;;;
1ED32;INDIC SIYAQ NUMBER TWENTY MILLION;No;0;AN;;;20000000;N;;;;;
1ED33;INDIC SIYAQ COMBINING NUMBER ONE;No;0;AN;;;1;N;;;;;
1ED34;INDIC SIYAQ COMBINING NUMBER TWO;No;0;AN;;;2;N;;;;;

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1ED35;INDIC SIYAQ COMBINING NUMBER THREE;No;0;AN;;;3;N;;;;;
1ED36;INDIC SIYAQ COMBINING NUMBER FOUR;No;0;AN;;;4;N;;;;;
1ED37;INDIC SIYAQ COMBINING NUMBER FIVE;No;0;AN;;;5;N;;;;;
1ED38;INDIC SIYAQ COMBINING NUMBER SIX;No;0;AN;;;6;N;;;;;
1ED39;INDIC SIYAQ COMBINING NUMBER SEVEN;No;0;AN;;;7;N;;;;;
1ED3A;INDIC SIYAQ COMBINING NUMBER EIGHT;No;0;AN;;;8;N;;;;;
1ED3B;INDIC SIYAQ COMBINING NUMBER NINE;No;0;AN;;;9;N;;;;;
1ED3C;INDIC SIYAQ COMBINING NUMBER TWENTY;No;0;AN;;;20;N;;;;;
1ED3D;INDIC SIYAQ COMBINING NUMBER EIGHTY;No;0;AN;;;80;N;;;;;
1ED3E;INDIC SIYAQ PLACEHOLDER MARK;So;0;L;;;N;;;;;
1ED3F;INDIC SIYAQ FRACTION ONE QUARTER;No;0;AL;;;1/4;N;;;;;
1ED40;INDIC SIYAQ FRACTION ONE HALF;No;0;AL;;;1/2;N;;;;;
1ED41;INDIC SIYAQ FRACTION THREE QUARTERS;No;0;L;;;3/4;N;;;;;
1ED42;INDIC SIYAQ RUPEE MARK;Sc;0;AL;;;N;;;;;

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3.7 Confusion Data

Given below are Arabic sequences that may mimic Indic Siyaq Numbers:

NUMBER ONE	; AIN, DOTLESS BEH, SAD
NUMBER TWO	; AIN, DOTLESS BEH, SAD, ALEF
NUMBER THREE	; DOTLESS BEH, DOTLESS BEH, YEH BARREE
NUMBER FOUR	; LAM, LAM, AIN
NUMBER FIVE	; SAD, HEH GOAL
NUMBER SIX	; LAM, YEH BARREE
NUMBER SEVEN	; HEH GOAL, AIN
NUMBER EIGHT	; HEH GOAL, YEH BARREE
NUMBER NINE	; LAM, AIN
NUMBER TEN	; AIN, NOON GHUNNA
NUMBER TWENTY	; AIN, DOTLESS BEH, NOON GHUNNA
NUMBER THIRTY	; DOTLESS BEH, DOTLESS BEH, NOON GHUNNA
NUMBER FORTY	; LAM, LAM, AIN, NOON GHUNNA
NUMBER FIFTY	; SAD, NOON GHUNNA
NUMBER SIXTY	; TATWEEL, NOON GHUNNA
NUMBER SEVENTY	; HEH GOAL, AIN, NOON GHUNNA
NUMBER EIGHTY	; LAM, NOON GHUNNA
NUMBER NINETY	; LAM, AIN, NOON GHUNNA
NUMBER ONE HUNDRED	; MEEM, ALEF
NUMBER TWO HUNDRED	; MEEM, ALEF, LAM, HEH GOAL
NUMBER THREE HUNDRED	; SEEN, MEEM, ALEF
NUMBER FOUR HUNDRED	; ALEF, AIN, MEEM, ALEF
NUMBER FIVE HUNDRED	; SAD, MEEM, ALEF
NUMBER SIX HUNDRED	; SEEN, TATWEEL, MEEM, ALEF
NUMBER SEVEN HUNDRED	; LAM, MEEM, ALEF
NUMBER EIGHT HUNDRED	; LAM, MEEM, ALEF
NUMBER NINE HUNDRED	; LAAM, AIN, MEEM, ALEF
NUMBER ONE THOUSAND	; ALEF, LAM, TATWEEL
NUMBER TWO THOUSAND	; AIN, DOTLESS BEH, TATWEEL
NUMBER THREE THOUSAND	; DOTLESS BEH, DOTLESS BEH, TATWEEL
NUMBER FOUR THOUSAND	; LAM, LAM, AIN, TATWEEL
NUMBER FIVE THOUSAND	; SAD, TATWEEL
NUMBER SIX THOUSAND	; SEEN, TATWEEL
NUMBER SEVEN THOUSAND	; HEH GOAL, AIN, TATWEEL
NUMBER EIGHT THOUSAND	; HEH GOAL, TATWEEL
NUMBER NINE THOUSAND	; LAM, AIN, TATWEEL
NUMBER TEN THOUSAND	; AIN, TATWEEL
NUMBER TWENTY THOUSAND	; AIN, DOTLESS BEH, TATWEEL
NUMBER THIRTY THOUSAND	; DOTLESS BEH, DOTLESS BEH, TATWEEL
NUMBER FORTY THOUSAND	; LAM, LAM, AIN, TATWEEL
NUMBER FIFTY THOUSAND	; SAD, TATWEEL

NUMBER SIXTY THOUSAND	; SEEN, TATWEEL
NUMBER SEVENTY THOUSAND	; HEH GOAL, AIN, TATWEEL
NUMBER EIGHTY THOUSAND	; HEH GOAL, TATWEEL
NUMBER NINETY THOUSAND	; LAM, AIN, TATWEEL
NUMBER ONE HUNDRED THOUSAND	; LAM, KEHEH, HEH GOAL
NUMBER TWO HUNDRED THOUSAND	; LAM, KEHEH, HEH GOAL, ALEF, NOON
HUNDRED THOUSANDS MARK	; LAM, KEHEH
TEN MILLIONS MARK	; KEHEH, REH, WAW, REH
NUMBER TWENTY MILLION	; KEHEH, REH, WAW, REH, ALEF, NOON
COMBINING NUMBER ONE	; LAM, HEH GOAL
COMBINING NUMBER TWO	; AIN, TATWEEL
COMBINING NUMBER THREE	; DOTLESS BEH, DOTLESS BEH, TATWEEL
COMBINING NUMBER FOUR	; LAM, LAM, AIN, TATWEEL
COMBINING NUMBER FIVE	; SAD, TATWEEL
COMBINING NUMBER SIX	; SEEN, TATWEEL
COMBINING NUMBER SEVEN	; HEH GOAL, AIN, TATWEEL
COMBINING NUMBER EIGHT	; HEH GOAL, TATWEEL
COMBINING NUMBER NINE	; LAM, AIN, TATWEEL
COMBINING NUMBER TWENTY	; AIN, DOTLESS BEH, TATWEEL
COMBINING NUMBER EIGHTY	; LAM, TATWEEL
PLACEHOLDER MARK	; SHADDA
FRACTION ONE QUARTER	; FULL STOP
FRACTION ONE HALF	; EXTENDED ARABIC-INDIC DIGIT ZERO
FRACTION THREE QUARTERS	; FULL STOP, EXTENDED ARABIC-INDIC DIGIT ZERO
RUPEE MARK	; DATE SEPARATOR

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5 Acknowledgments

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	1ED0	1ED1	1ED2	1ED3	1ED4
0		مو 1ED10	صم 1ED20	لک 1ED30	• 1ED40
1	عمم 1ED01	له 1ED11	سم 1ED21	کروړ 1ED31	ث 1ED41
2	عما 1ED02	لوه 1ED12	مع 1ED22	کروړاں 1ED32	ر 1ED42
3	ے 1ED03	ما 1ED13	سم 1ED23	لہ 1ED33	
4	للوہ 1ED04	مالہ 1ED14	لعم 1ED24	لہ 1ED34	
5	صہ 1ED05	سما 1ED15	عہ 1ED25	لہ 1ED35	
6	لے 1ED06	اعما 1ED16	عہ 1ED26	للوہ 1ED36	
7	موہ 1ED07	صما 1ED17	بہ 1ED27	لہ 1ED37	
8	مے 1ED08	سما 1ED18	للوہ 1ED28	لہ 1ED38	
9	لوه 1ED09	لما 1ED19	صہ 1ED29	موہ 1ED39	
A	عہ 1ED0A	لہا 1ED1A	لہ 1ED2A	لہ 1ED3A	
B	عمہ 1ED0B	لعمہ 1ED1B	موہ 1ED2B	لہ 1ED3B	
C	سمہ 1ED0C	الہ 1ED1C	لہ 1ED2C	لہ 1ED3C	
D	للوہ 1ED0D	عمہ 1ED1D	لہ 1ED2D	لہ 1ED3D	
E	صہ 1ED0E	سمہ 1ED1E	لکھہ 1ED2E	سہ 1ED3E	
F	لہ 1ED0F	لعمہ 1ED1F	لکھہاں 1ED2F	- 1ED3F	

Figure 1: Proposed code chart for Indic Siyaq Numbers.

The Indic Siyaq Numbers are also known in South Asia as 'Raqm' or 'Rakam' numbers.

Primary Units

1ED01	عندہ	INDIC SIYAQ NUMBER ONE
1ED02	عشہ	INDIC SIYAQ NUMBER TWO
1ED03	تہ	INDIC SIYAQ NUMBER THREE
1ED04	چار	INDIC SIYAQ NUMBER FOUR
1ED05	پنہ	INDIC SIYAQ NUMBER FIVE
1ED06	چھ	INDIC SIYAQ NUMBER SIX
1ED07	ساتھ	INDIC SIYAQ NUMBER SEVEN
1ED08	آٹھ	INDIC SIYAQ NUMBER EIGHT
1ED09	نہ	INDIC SIYAQ NUMBER NINE

Tens

1ED0A	دہ	INDIC SIYAQ NUMBER TEN
1ED0B	دو دہ	INDIC SIYAQ NUMBER TWENTY
1ED0C	تین دہ	INDIC SIYAQ NUMBER THIRTY
1ED0D	چار دہ	INDIC SIYAQ NUMBER FORTY
1ED0E	پنہ دہ	INDIC SIYAQ NUMBER FIFTY
1ED0F	چھ دہ	INDIC SIYAQ NUMBER SIXTY
1ED10	ساتھ دہ	INDIC SIYAQ NUMBER SEVENTY
1ED11	آٹھ دہ	INDIC SIYAQ NUMBER EIGHTY
1ED12	نہ دہ	INDIC SIYAQ NUMBER NINETY

Hundreds

1ED13	سہ	INDIC SIYAQ NUMBER ONE HUNDRED
1ED14	چار	INDIC SIYAQ NUMBER TWO HUNDRED
1ED15	پنہ	INDIC SIYAQ NUMBER THREE HUNDRED
1ED16	چھ	INDIC SIYAQ NUMBER FOUR HUNDRED
1ED17	ساتھ	INDIC SIYAQ NUMBER FIVE HUNDRED
1ED18	آٹھ	INDIC SIYAQ NUMBER SIX HUNDRED
1ED19	نہ	INDIC SIYAQ NUMBER SEVEN HUNDRED
1ED1A	دس	INDIC SIYAQ NUMBER EIGHT HUNDRED
1ED1B	ایک دہ	INDIC SIYAQ NUMBER NINE HUNDRED

Thousands

1ED1C	ایک ہزار	INDIC SIYAQ NUMBER ONE THOUSAND
1ED1D	دو ہزار	INDIC SIYAQ NUMBER TWO THOUSAND
1ED1E	تین ہزار	INDIC SIYAQ NUMBER THREE THOUSAND
1ED1F	چار ہزار	INDIC SIYAQ NUMBER FOUR THOUSAND
1ED20	پنہ ہزار	INDIC SIYAQ NUMBER FIVE THOUSAND
1ED21	چھ ہزار	INDIC SIYAQ NUMBER SIX THOUSAND
1ED22	ساتھ ہزار	INDIC SIYAQ NUMBER SEVEN THOUSAND
1ED23	آٹھ ہزار	INDIC SIYAQ NUMBER EIGHT THOUSAND
1ED24	نہ ہزار	INDIC SIYAQ NUMBER NINE THOUSAND
1ED25	دس ہزار	INDIC SIYAQ NUMBER TEN THOUSAND
1ED26	ایک دہ ہزار	INDIC SIYAQ NUMBER TWENTY THOUSAND
1ED27	دو دہ ہزار	INDIC SIYAQ NUMBER THIRTY THOUSAND
1ED28	تین دہ ہزار	INDIC SIYAQ NUMBER FORTY THOUSAND
1ED29	چار دہ ہزار	INDIC SIYAQ NUMBER FIFTY THOUSAND
1ED2A	پنہ دہ ہزار	INDIC SIYAQ NUMBER SIXTY THOUSAND
1ED2B	چھ دہ ہزار	INDIC SIYAQ NUMBER SEVENTY THOUSAND
1ED2C	ساتھ دہ ہزار	INDIC SIYAQ NUMBER EIGHTY THOUSAND
1ED2D	آٹھ دہ ہزار	INDIC SIYAQ NUMBER NINETY THOUSAND
1ED2E	نہ دہ ہزار	INDIC SIYAQ NUMBER ONE HUNDRED THOUSAND
		= one lakh
1ED2F	ایک لاکھ	INDIC SIYAQ NUMBER TWO HUNDRED THOUSAND
		= two lakhs
1ED30	لکھ	INDIC SIYAQ HUNDRED THOUSANDS MARK
		= lakh multiplier
		• written with combining forms of primary units

Millions

1--9 million is written using primary units and the hundred-thousands mark

1ED31	کرور	INDIC SIYAQ TEN MILLIONS MARK
		= karor; 100 lakhs
		• written with primary units to express 30--90 million
1ED32	کروڑ	INDIC SIYAQ NUMBER TWENTY MILLION
		= two karor; 200 lakhs

Combining Forms

1ED33	۱۰	INDIC SIYAQ COMBINING NUMBER ONE
1ED34	۲۰	INDIC SIYAQ COMBINING NUMBER TWO
		• represents 10 when writing lakhs
1ED35	۳۰	INDIC SIYAQ COMBINING NUMBER THREE
		• represents 30 when writing lakhs
1ED36	۴۰	INDIC SIYAQ COMBINING NUMBER FOUR
		• represents 40 when writing lakhs
1ED37	۵۰	INDIC SIYAQ COMBINING NUMBER FIVE
		• represents 50 when writing lakhs
1ED38	۶۰	INDIC SIYAQ COMBINING NUMBER SIX
		• represents 60 when writing lakhs
1ED39	۷۰	INDIC SIYAQ COMBINING NUMBER SEVEN
		• represents 70 when writing lakhs
1ED3A	۸۰	INDIC SIYAQ COMBINING NUMBER EIGHT
1ED3B	۹۰	INDIC SIYAQ COMBINING NUMBER NINE
		• represents 90 when writing lakhs
1ED3C	۲۰۰	INDIC SIYAQ COMBINING NUMBER TWENTY
1ED3D	۸۰۰	INDIC SIYAQ COMBINING NUMBER EIGHTY

Placeholder Mark

1ED3E	۰	INDIC SIYAQ PLACEHOLDER MARK
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Fractions

1ED3F	-	INDIC SIYAQ FRACTION ONE QUARTER
1ED40	•	INDIC SIYAQ FRACTION ONE HALF
1ED41	÷	INDIC SIYAQ FRACTION THREE QUARTERS

Currency Sign

1ED42	₹	INDIC SIYAQ RUPEE SIGN
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Figure 2: Proposed names list for Indic Siyaq Numbers.



Figure 3: A one-rupee note from Hyderabad State showing text written in Indic Siyaq, Telugu, Kannada, Devanagari, Arabic, and Latin. The number **ONE** is shown in the upper right-hand corner of the reverse. Image courtesy of Rezwan Rezack.



Figure 4: A ten-rupee note from Hyderabad State showing text written in Indic Siyaq, Telugu, Kannada, Devanagari, Arabic, and Latin (from Wikimedia 2010). The number 10 TEN is shown in the center of the reverse.

پرکنہ کا کماری
 عس
 منقضي لغایت اسماؤ قسط سانوں
 عس
 وجوہ
 آسامی روپیہ افزون
 ۱۳ سانوں ۶ و عس
 ۲۵ منہ ۱۱ مائیدہ
 ۱۱ لالویدہ
 ۶
 تنہ
 ۱۰
 ۱۰

Figure 5: Revenue record from Bengal containing Indic Siyaq Numbers (from Gladwin 1790: 46). Note the ascending vertical manner of writing the Siyaq numbers and the placement of small currency values beneath the numbers.

مسابقات
آمدنی خزانہ محالات ضلع سابر میں وغیرہ سنہ ۱۹۰۹ء

۱۸ سوال
یوم الجمعہ

۲۹ ماہ بہادون ۱۲ سبتمبر
تجوین کا نمونہ اس کہہ کر اپنی

لکھو

صرف / ۳
منہا صرف وغیرہ

صرف	کم وزن
عہ	عفا
۱۵/۱۴	۱۵/۹

سکہ لکھو
لاکھ

X منہا صرف
لاکھ

سنوات
لکھو

منہا صرف وغیرہ
۱۴

عفا
۱۴

Figure 6: Another revenue record from Bengal containing Indic Siyaq Numbers (from Gladwin 1790: 63). Note the ascending vertical manner of writing the Siyaq numbers and the placement of small currency values beneath the numbers.