

# GRADUATION PROJECT

## VISUAL COMMUNICATION (BACHELOR OF DESIGN)

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Vol. 1 of 1

Project Title:

**Typographic conservation of Modi script  
and its adaptation in Devanagari**

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Name:

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Project Mentor:

**Mahendra C Patel**

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**2025**



The Graduation Project Evaluation Jury recommends **MUKTA GAGE** from **Visual Communication** for the Bachelor's Graduation Degree of **Unitedworld Institute of Design, Karnavati University, Gardhingar, India** herewith, for the project titled **Typographic conservation of Modi script and its adaptation in Devanagari**. The project is complete in every aspect in accordance to the guidelines set by the institution.

**Chairperson** .....  
Signature ..... Name ..... Organization .....

**Members** .....  
Signature ..... Name ..... Organization .....

.....  
Signature ..... Name ..... Organization .....

.....  
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\*Subsequent remarks regarding fulfilling the requirements

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## Acknowledgements

I wish to show deep gratitude to the Divine power that has provided everything that enriches my life. Because of their constant support, my parents have created the person I am today and I am immensely thankful for their love.

Through my educational experience, I garnered precious guidance from Mahendra Patel Sir, Sambit K. Pradhan Sir along with other professors and department heads with their notable backgrounds. My friends have blessed me with four years during which I accumulated treasured memories together with delightful moments. Om Bhave, in particular, I want to acknowledge because your endless support, words and actions, became an inspiration and anchor for me. My mentors alongside department heads alongside all of you have enriched my life and for that, I am truly grateful.

## About UID

UID operates as a Karnavati University constituent and has gained recognition through its advanced design educational methods, which unite experiential learning with global exposure. The institute's educational environment allows students to explore creative interdisciplinary work and develop their boundaries in innovative ways. The designed curriculum teaches students to use critical thinking with a problem-solving approach while fostering teamwork to address human-focused real-life challenges. Being enrolled at UID provides professional skills but also helps students develop into future-oriented members who can make meaningful social contributions.



## About Me

Through empathy, design reaches its exceptional level of quality. The fundamental principle of my design philosophy emphasizes human experiences because I deeply study user behaviors. My commitment lies in developing designs that build authentic connections through understanding user needs, detecting their emotions, and establishing the original cause of their communication. My passion leads me to create sustainable solutions that connect emotionally with users while maintaining complete user-centeredness. User experience remains the core principle that guides my design approach because it generates the most effective results by delivering positive experiences to users.



## About Mahendra Patel

As a design professional Mahendra Patel earned great respect through his four-decade professional career. He worked 39 years at the National Institute of Design (NID) in Ahmedabad before retiring as Principal Designer in 2003. Patel's education revolves around fine arts and graphic design because he studied Painting at the Faculty of Fine Arts M. S. University Baroda (1960-64) followed by Graphic Design at NID Ahmedabad (1964-67). The School of Design Basel awarded him advanced training in Graphic Design and Typography in 1968 while he dedicated 1971 to type design work at Atelier Frutiger alongside Adrian Frutiger in Paris.

The Type Design Development projects developed by Patel amounted to extensive work on Devanagari, Gujarati, Bengali, and Tamil scripts and expanded to include Oriya, Malayalam, Gurumukhi, Kannada, and Telugu scripts. During his career, Patel devoted himself to teaching design by leading workshops and delivering teaching sessions at important international educational facilities throughout India and worldwide. Presently he holds the role of Adjunct Professor at the United World Institute of Design (UID) within Karnavati University's Gandhinagar campus.



# *Preface*

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Typography can act as a strong instrument for heritage preservation along with cultural celebration. During their rule from 1260 to 1309, the Yadava dynasty created the Modi script through which the written presentation of Marathi cultural and historical documents continues to be relevant today. After its administrative origins, the writing system evolved into Modi script that established its own distinctive character to match the linguistic evolution and artistic elements of that time. British colonial administration caused Modi script to face decline when Devanagari acquired prominence until the point where its use vanished permanently.

The objective behind this work involves preserving the core values of Modi script and establishing its relevance with adaptations in Devanagari's typographic systems. The research establishes a connection between the preservation of historical values while building functions that allow modern digital users to utilize Modi script. This research contribution to typographic preservation includes documenting Modi script while digitizing its writing system and presenting an adaptation design system.

A new typeface emerged from developmental design phases uniting past traditions for a contemporary Modi script meeting historical needs along with typography criteria of the current era. Strategies for upholding preservation requirements while achieving innovation despite reading problems in digital interfaces and issues about cultural suitability are also mentioned. This project works to restore the Modi script through its initiative while establishing a template to protect endangered language systems.

# Timeline

## Phase 1

The design process for developing Modi script and Devanagari typeface began with research and analysis, focusing on the historical and aesthetic aspects of both scripts.

## Phase 2

Concept development involved creating sketches and visual references to explore potential adaptations.

## Phase 3

Prototyping saw the creation of digital typefaces using specialized software.

## Phase 4

Iteration and refinement involved gathering feedback and making necessary adjustments to enhance readability and aesthetic harmony. Finally, finalization included testing the typeface across various mediums and documenting the process.



# *Introduction*

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- Introduction
- Evolution of Mod
- Decline of Mod
- Revival of Mod
- Varnamala
- Form wise Categorization
- Characteristic Study
- Comparative Study
- Design Brief

# Modi lipi

Modi script is a Brahmi based script used primarily for writing Marathi and some other languages like Kannada, and Konkani.



Traditional Devanagari was found to be excessively time-consuming since each character required over 3 to 5 strokes and the lifting of the hand each time for each stroke. Modi got round this obstacle by 'bending' the letters, improving speed writing.

## Origin

Modi was developed by Hamadpant Pandit (during reign of Yadava dynasty (1260-1309).

## Creation

The Modi script was invented as a cursive 'shorthand' or speed writing to note down royal edicts.

## Influence

Inspired by the cursive Sinhalese script- which involved less lifting of the hand while writing.

## Etymology

Comes from the Marathi word "modane," meaning "to bend."

## Purpose

To streamline the writing process, practical for various purposes, especially in administration and official royal contexts.

# Evolution of Modi

13th-14th Century

## YADHAVKALIN MODI

*Yadav dynasty is credited with popularizing the use of the Modi script*



17th Century

## SHIVKALIN MODI

*Golden age of the Modi script*

Perso-Arabic influences, refined letterforms diverse variations in this era

19th-20th Century

## ANGLAKALIN MODI

*Decline of Modi script*

Latin script co-existed alongside Modi. Traditional writing tools transitioned to mechanical calligraphy pens which modified the way Modi was written.

16th Century

## BAHAMANIKALIN MODI

*The Bahamani period saw further development and refinement of the Modi script*

Evident that the script was heavily influenced by Perso-Arabic cursive styles. Newer letterform variations.



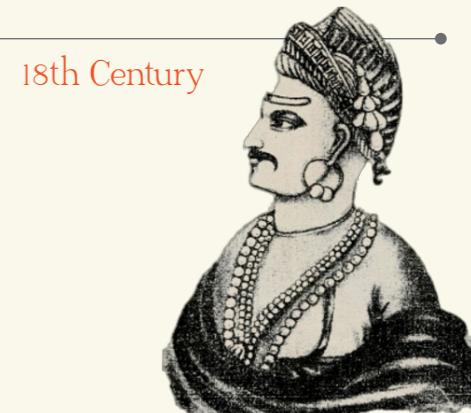
18th Century

## PESHWEKALIN MODI

*Gave rise to 3 styles*  
-Mahadajipanti  
-Biwalkari  
-Ranadi

*Evolved into a more structured and pleasing writing system.*

*Evolution was marked by a distinct refining of its letterforms, with curves becoming more elongated.*





## Decline of Modi

*The social and political changes in India throughout the 20th century threatened to eliminate the Modi script which held significant importance for Marathi cultural heritage.*

The beginning of its downfall is marked by early 20th century under the British Government of the Bombay Presidency. The British had been driven by a desire for administrative convenience and uniformity throughout this region, and the Devanagari (Balbodh) script came to be the first choice as the main writing system. Devanagari's more positive integration with printing technology further supported this preference, as Modi slowly replaced Devanagari from official and widespread use.

Despite these formidable challenges, the Modi script is being revived and preserved in a renewed cultural awareness, a fact that makes certain that the legacy of the Modi script will survive.

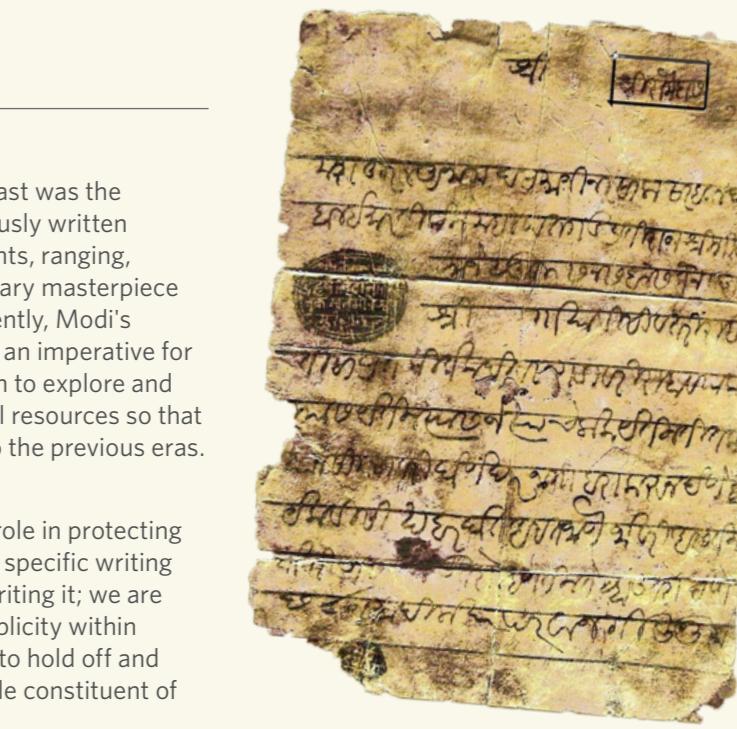
## Revival of Modi

Further, the ending of the British colonial era made use of the Modi script more and more, by making it more and more marginalizing the Modi script through actively promoting the use of English as the language in administration as well as education. The Modi script itself was not standardized, facilitating only a limited use - an explanation that even further compounds the external pressure. The educational area underwent a drastic transform where with the growing Devanagari (Balbodh) in the schools and institutions, it began drop greatly in the teaching and learning of Modi.

*The Modi's script lives to prove that India's cultural history and heritage has had significant impact and value that goes way beyond mere linguistic expression.*

The Maratha civilization had built this unique written form which now stands as a vital link in the history of this country. Letting it fade would be a senseless loss of a precious part of India's linguistic and artistic patrimony, reducing the rich colorfulness of the country's cultural kaleidoscope. Consequently, it is important to revive and to diligently conserve it.

Resurgent Modi script plays a key role in protecting India's rich linguistic diversity. This specific writing system endures so long as we're writing it; we are helping to preserve linguistic multiplicity within the nation, which is to say, helping to hold off and celebrate a special and irreplaceable constituent of our cultural geography.



## Varnamala

Vowels

ਅ ਏ ਈ ਇ ਔ ਅੋ ਏੋ ਈੋ ਅੰ ਅ੍ਰਾ:

Consonants

ਨ ਈ ਗ ਘ ਡ ਤ ਤ ਛ ਜ ਝ ਝ ਝ  
ਹ ਹ ਤ ਠ ਤ ਤ ਧ ਚ ਚ ਚ ਚ  
ਦ ਨ ਘ ਸ ਸ ਦ ਦ ਜ ਚ ਪ ਥ  
ਥ ਤ ਹ ਕ ਕ ਛ

## Form wise categorization

Recurring form Family

ਅ ਅੋ ਅੰ ਅ੍ਰਾ:

ਏ ਏੋ ਏ੍ਰਾ

ਈ ਈ ਈ ਈ ਈ ਈ

ਝ ਝ ਝ ਝ ਝ ਝ

ਗ ਤ ਥ ਥ ਥ ਥ

Recurring form Family

ਤ ਤ ਝ ਝ ਝ ਝ

ਹ ਹ ਹ ਹ ਹ ਹ

ਚ ਚ ਚ ਚ ਚ ਚ

ਧ ਧ ਧ ਧ ਧ ਧ

ਕ ਕ ਕ ਕ ਕ ਕ

# Charateristics of Modi



01 The primary horizontal axis for all of the letterforms is a single shiroekha line. The shiroekha stroke is the first, and subsequent letter components are written below it.

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02 Modi script written in the hand varies significantly from writer to writer. They range in ways involving spacing, with some writers leaving bigger spacings between words and others leaving smaller ones.

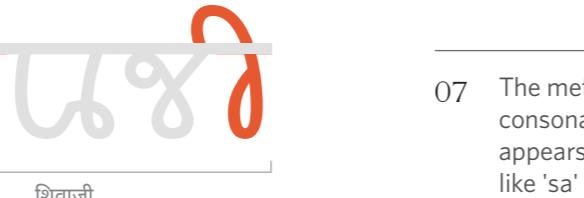
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03 Certain vowels and consonants, when combined with vowel conjuncts in Modi script, do not simply receive diacritical marks (matras). Instead, their entire letterform undergoes a significant transformation.  
(Here observe the case of ला, ले in the word लाभले)

04 The 'eka' well

05 Her sam

06 Wh som writ gen in D dia



forms yet some  
es only through



ain letters and conjunct forms in the Modi  
ot show allographic variation.

"allograph" refers to a variant form of  
written symbol. Each written character  
contains its original meaning through various  
ible writing styles that represent it.

b. When a consonant wi  
the letter ଜ changes to ର



b. When a consonant with the letter J changes to ڙ



d. When a consonant with a matra is conjunct with ଟ (ତ), ଜ (ଜ) or ଣ (ଣ), the matra itself.

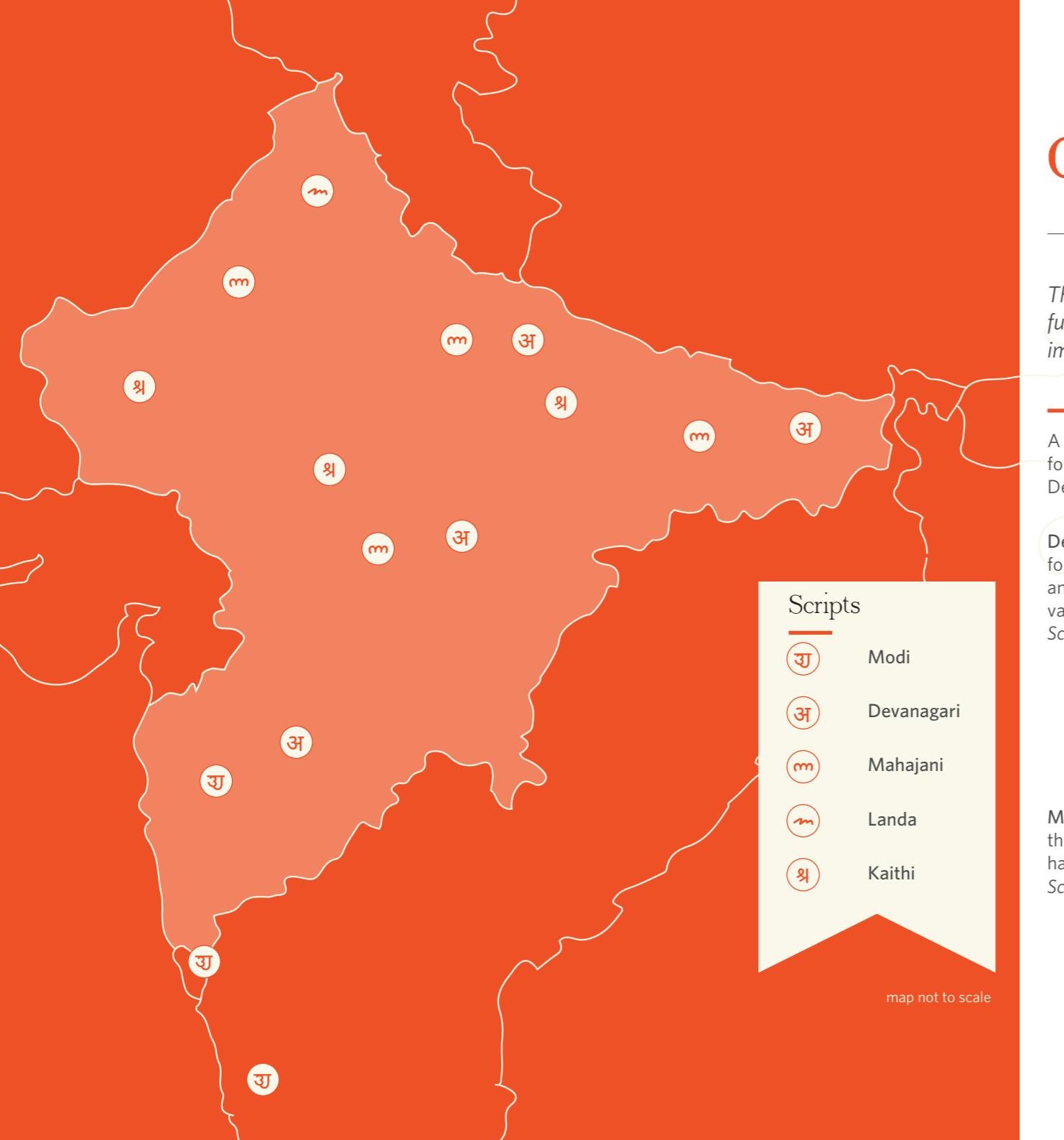
conjunction with  $\sigma_1$  ( $\sigma$ ),  $\sigma$  ( $\sigma$ )  
matra itself.

## Modi's Unique Sys

ana precedes Although based on the same underlying principles as Devanagari, Modi script contains substantial differences in terms of its appearance and written conventions.

In specific contexts, actual differences in the work of character are observable, and cannot be neglected. Unlike Devanagari writers, Modi orthography has some different consonant conjuncts and vowel-consonant combination rules. The distinctions are made on account of fundamental elements that impact on correct interpretation of Modi texts, and so require special knowledge.

Modi script is unique because it has combination of letters and flowing writing style which makes it different from other scripts.



## Comparative Study

The historical scripts of Modi orthography need full examination to understand its impact properly.

A detailed assessment investigates Modi among four leading scripts during that time period including Devanagari, Mahajani, Landa, and Kaithi.

Devanagari operates as a primary analysis point for Sanskrit and multiple Indo-Aryan languages and stands out as an essential script which affects various regional writing methods.

Script Characteristics:

- An abugida script with clear, and segmented characters.
- Features a shirorekha over arrangement of vowels and consonants.
- Serves as a primary script for literary, religious, and academic texts.

Mahajani, acted as primary recording script throughout western and northern regions of India to handle commercial documentation.

Script Characteristics:

- A cursive script, condensed letterforms.
- Primarily used for the documentation of mercantile transactions.
- Has regional variations.

Landa used as a short and practical mercantile script. Script Characteristics:

- Used for commercial accounting, for ledgers, and trade-related documents.

- Have a high degree of variation and lacks a standardized form.

Kaithi, a script used for administrative and legal documents in northern and eastern India, demonstrates the regional diversification of Indic scripts.

Script Characteristics:

- Features simplified letterforms and flowing ligatures.

- Employed for writing languages like Bhojpuri, Magahi, and Awadhi.

- Used for administrative documents.

An investigation of Modi script elements reveals how adapted characteristics distinguish it from both Devanagari and Mahajani and Landa and Kaithi scripts. The Modi script resembles Devanagari through its structure but it adds cursive writing and ligatures to reach high writing speed. The standard business scripts Mahajani and Landa use a simpler operation structure than the design found in Modi. Kaithi, with regional variations, highlights the diverse evolution of the scripts.

Here we evaluate Modi specifically as a writing system which functioned in regional document and administration activities and advances our understanding of social factors influencing subcontinent writing system evolution.

MODI	DEVANAGARI	MAHAJANI	LANDA	KAITHI
ग	ग	ग	ग	ग
घ	घ	घ	घ	घ
छ	छ	छ	छ	छ
झ	झ	झ	झ	झ
ज	ज	ज	ज	ज
ड	ड	ड	ड	ड
ढ	ढ	ढ	ढ	ढ
आ	ण	ण	ण	ण
त	त	त	त	त
ঢ/ঘ	ঢ	ঢ	ঢ	ঢ
ছ	ছ	ছ	ছ	ছ
জ	জ	জ	জ	জ
ড	ড	ড	ড	ড
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ত	ত	ত	ত	ত
ঢ/ঘ	ঢ	ঢ	ঢ	ঢ
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আ	ণ	ণ	ণ	ণ

*Design Brief*

Design a Modi script typeface as a vital tool for conservation efforts, enabling the preservation and revival of this historical writing system.

## *Primary Research*

---

- Font Analysis
- User Mapping
- Design Interventions
- Revised Project Brief
- Collecting Samples
- Letterform Evolution Study

# Font Analysis

## NOTO SANS MODI

*This is a widely accessible font developed by Google as part of their Noto font family. It provides a basic support for the Modi script.*

o Modi font displays multiple advantages. The script format maintains classical Modi symbols and an expansive character set to support numerous signs from the traditional Modi script. The font's high quality standards from the font create convenient digitization for academic researchers and common use. By integrating into the Noto family of fonts, the design principles and multiple script languages are consistent support throughout. Needless to say there are more strengths of the Noto Modi font than other fonts. The expression of the Modi script is clear and the font displays its aesthetic character. The font's adherence to stylistic features is consistent and the font fails to display the particular features of the Modi calligraphy. Problems include the lack of a consistent range of weight variations and the lack of a consistent range of weight variations.

weaknesses alongside the di font. Despite having more ppts it only captures a limited script because it fails to characteristics. The incomplete lity produces a result that lar aspects which define ns in the font arise from its ations and insufficient width versatility in implementation.



This infographic illustrates the design and features of the Gurbani font, a modern sans-serif typeface for Gurmukhi script.

**Letterform Anatomy:**

- ਸ:** No contrast
- ਅ:** Sans-serif font. Doesn't strictly adhere to the style of historical script.
- ਨ:** Smooth streamlined Turns.
- ਿ:** Linear weight, Shirorekha, with proper neck joinery.
- ਲ:** Angular oblique terminals.
- ੴ:** Vertical inclination.
- ਿੰ:** Straight, sans-serif kana.

**Character Variations:** ਅ (Single character variation)

**Streamline:** Round — Angular

**Unicode Compliance:** Unicode-compliant

**Ligature Formation:** ਕੁ, ਗੁ, ਸੁ, ਪੁ, ਅੰਮ, ਗੰਡ (New glyph for specific vowel consonant combinations)

**Weights:** Regular

**Designed by:** Monotype Design

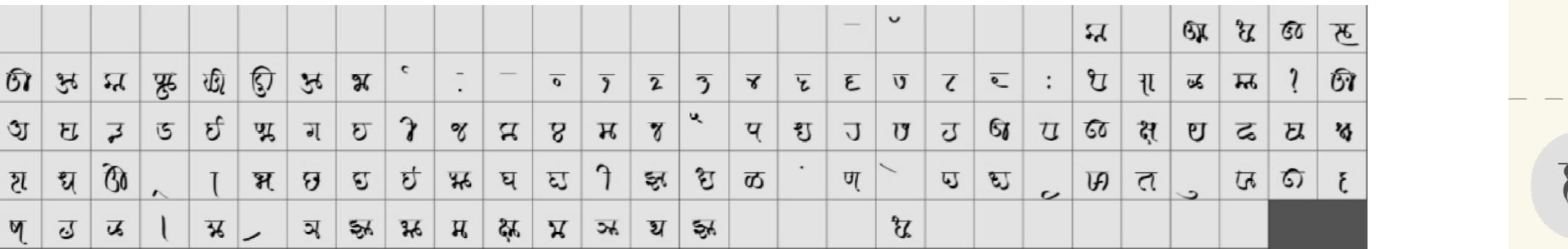
**Axis:** None

**Proper conjunct formation:** ਸਾਡੀ

**Clear and legible letter and matra spacing:** ਹੋਂਦੇ ਹੋਂਦੇ ਹੋਂਦੇ ਹੋਂਦੇ ਹੋਂਦੇ

HEMADREE MODI

*Hemadree Modi makes efforts to preserve the classical calligraphic elements of Modi script when applied to digital formats as well as printed materials.*



Standard font establishment diminishes both quality and stability capacity. Insufficient action together with substandard digital create restrictions for typographical use to rendering difficulties specifically for sys.	Inadequate design of the shirorekha and broad chandras, problematic matra spacing, readability and grant attributes.
---	--

font leads to erratic character spacing and alignment which decrease the effectiveness.



## MODIGHATE

ModiGhate stands out as the preferred font since it delivers both elegance along with easy readability for multiple media outlets while serving educational purposes



The ModiGhate shows its strength through dedication to maintain the core element structure of written characters and its reliable character style that creates uniform dimensions and proportions. The font contains smooth angular transitions which create a separate visual aesthetic. Although this font contains multiple disadvantages. The main weakness of this design is its inability to present various weight values.

Inadequate digital construction of letters causes performance problems and deviations in how characters appear onscreen. The inconsistent kerning design elements damage the finished product while simultaneously causing digital display problems. The script's correct depiction remains limited because the font lacks proper conjunct formations.



## MODIKHILARI

This font seeks to present the Modi script in classical form by embracing historical standards which aligns well with academic research needs.

values of this font involve maintaining letterform structures while following script formats in a commitment to historical The font includes unique letterforms for final cases alongside proper conjunct elements lost its accuracy and historical value. Various cases of weakness complicate the operation of m. The readability problems created by the d to obstruct users.

A minimalist character set is designed to prevent the font from representing a wide range of characters precisely. The combination of characters is often inadequate digital constraints. The visual and digital rendering of characters in this script create restlessness in digital applications and stress on the eyes. The font is available in different weight levels.

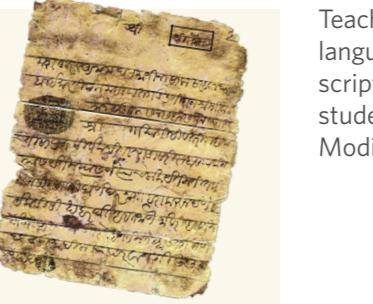
ection prevents the  
vanced textual elements  
n of kerning problems with  
ction leads to inconsistent  
g issues. Weight variations  
tions for typographic  
munication through



# User Mapping

## Scholars and Researchers

Linguists, historians, manuscriptologists, epigraphers, and other academics studying pre-modern Maharashtra and its related cultures.



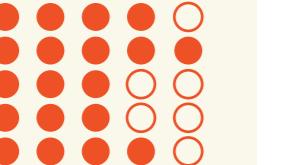
### Goals

- Transcription activities
- Historical document analysis
- Digital archive creation
- Scientific publications

### Usage

- Transcription of manuscripts
- Digital archive development
- Scientific paper publication with
- Conference presentations

Character Distinction  
Variables (characters)  
Historical Accuracy  
Aesthetic  
Versatility (periods)



## Educators and Students

Teachers of Marathi language (Modi script) and history, students learning Modi script.



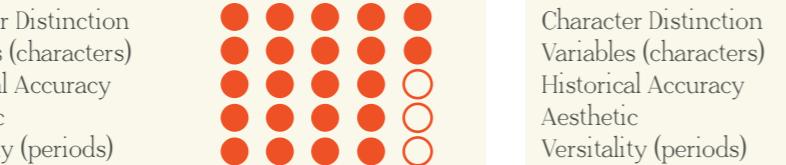
### Goals

- Effective script instruction knowledge delivery
- Script reading along with scripting abilities

### Usage

- Developing educational resources and online interfaces
- Written practice
- Text analysis and presentation preparation

Character Distinction  
Variables (characters)  
Historical Accuracy  
Aesthetic  
Versatility (periods)



## Cultural Heritage Enthusiasts

People who study Marathi cultural history and genealogy. Members of cultural organizations together with local history guests make up this user group.



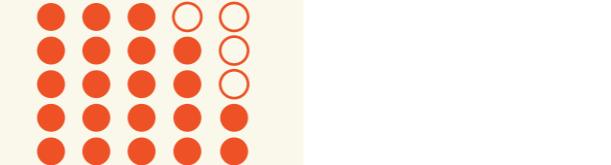
### Goals

- Preservation of Modi script as well as the promotion of its usage in modern times.
- Producing both digital and physical duplicates of historical documents.
- Learning and teaching the script.

### Usage

Varies widely according to personal use from hobbyists to professionals in other fields

Character Distinction  
Variables (characters)  
Historical Accuracy  
Aesthetic  
Versatility (periods)



# Possible Design Interventions

## Digital Preservation

### Typographic conservation

Create high-quality digital fonts in various styles to facilitate easy typing and printing of Modi script with a focus on technical accuracy (Unicode, OpenType) and stylistic range (historical periods, weight variations).

### Creative reinterpretation and Modernization

Study Modi's aesthetic through that cursive-flowing and unique forms of letters into another script, and design fresh innovative, culturally-relevant hybrid scripts generating artistic interest and expanding the visual possibilities of Modi. Script forms possible-Devanagari, Latin.

## Interactive Exhibits

Using interactive equipment as digital displays, touchscreens, and hands-on activities, all will take the visitors back into history and experience the script much more richly, while gaining perspective in and concerning cultures.

## Educational Initiatives

1. Creative Learning Materials  
Creating learning materials, engaging and interactive, so that they make learning enjoyable.
2. Online Platforms and Resources  
Creating online platforms and resource materials, including interactive modules for study, online dictionaries, and translation tool to increase the accessibility of Modi script to learners.
3. Gamified Learning Platforms  
Incorporate gaming mechanics for the purpose of enjoyment, fun, and motivation in learning.

## Cultural Revitalization & Promotion

1. Preserving Modi script alive by conducting community events and workshops. These events would attempt to build the community through the display of calligraphy, literature and cultural heritage, sharing of skills and raising awareness on the script.

2. Also capable of initiation of action that bear, for future generations, through documentaries and other multimedia presentations of the history, cultural significance and challenges in the preservation.

## VR & AR Experiences

Creating immersive VR/AR experiences of Modi script historical manuscript where users can interact with ancient texts and artifacts, and virtually with ancient texts and artifacts, gaining a more understanding of how and why it's important in a modern format.

*Revised Design Brief*

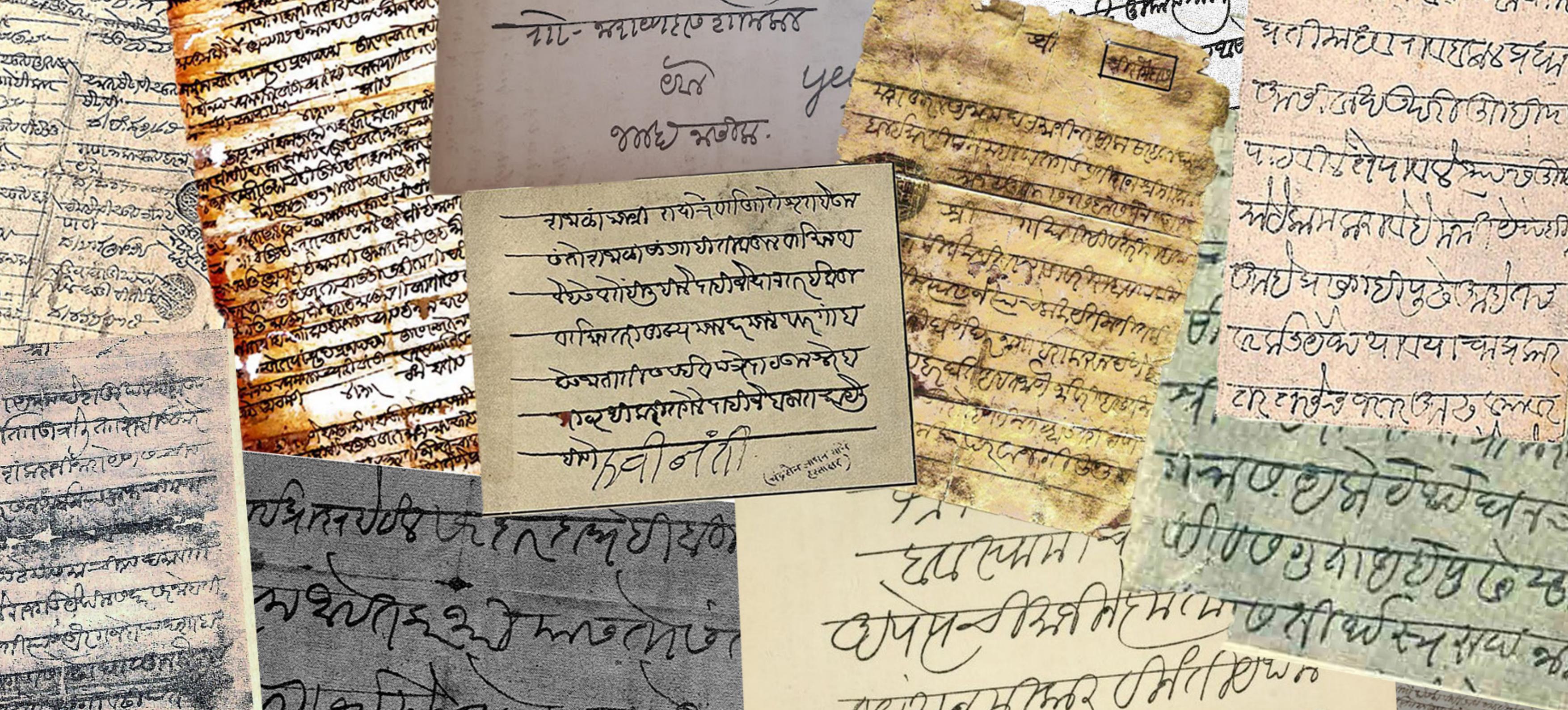
Typographic revival and conservation of the Modi script and adapting it to contemporary Devanagari script, preserving its aesthetic and historical significance.

## Collecting Samples

To facilitate analysis of Modi script's historical evolution, I collected a group of documents written in Modi, from various sources, which I categorized in terms of the historical periods- Bahamanikalin, Shivakalin, Peshwakalin and Anglakalin periods.

By following this systematic procedure, the characteristics and writing styles are studied in a comparative way of Modi's different features and styles at different times, so the changes in letterforms, orthography and the effect of socio and political environments are identified. Such timeline of the development of Modi script would then be helpful for its accurate interpretation and digital preservation.

The samples given here have been gathered from a variety of sources including the Bharat Itihas Sanshodhak Mandal and Poona Akhbars Vol. These include Modi Documents In The T. M. S. S. Library Vol. 1 Series No. 409 (Thanjavur Sarasvati Mahal Series), Dr. Dhammapal Mashalkar's Modi Vaibhav and, Modi documents from Tanjore in Danish collections.



# Evolution of the letter

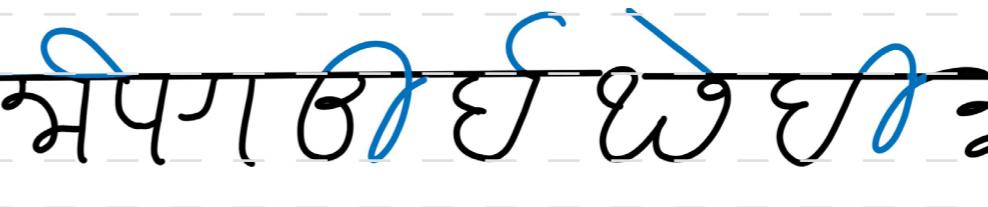
## Bahamnikalin Modi

Influence	Modi script in the Bahmani period was highly influenced by perso-arabic script	Character anatomy	Matra proportion is 1:1 Character Anatomy- simpler forms (Shirorekha above the consonant not often)
Emerging cursive	Characters are highly looped and flow into each other.	Extent	spread with Bahmani Sultanate in Maharashtra, Telangana, and Karnataka
Consonant cluster	Follow Devanagari style shirorekha	Word spacing	Minimal spacing between letters and words as well.



## Shivkalin Modi

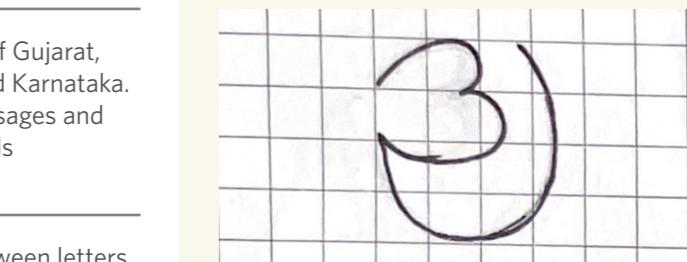
Influence	Modi script was influenced by perso-arabic script	Character anatomy	Simple forms, practical short matras with one horizontal line above consonants. Letter : Matra Proportion- 1: 0.5
Emerging cursive	Letters do not flow seamlessly into one another. Character recognition is legible	Extent	Maharashtra, parts of Gujarat, Madhya Pradesh, and Karnataka. Key tool for war messages and administrative records
Consonant cluster	Letter joined, compact characters	Word spacing	Minimal spacing between letters and words as well as word spacing.



## The Process



01. Letter identified from samples



02. Reconstructing skeleton from samples



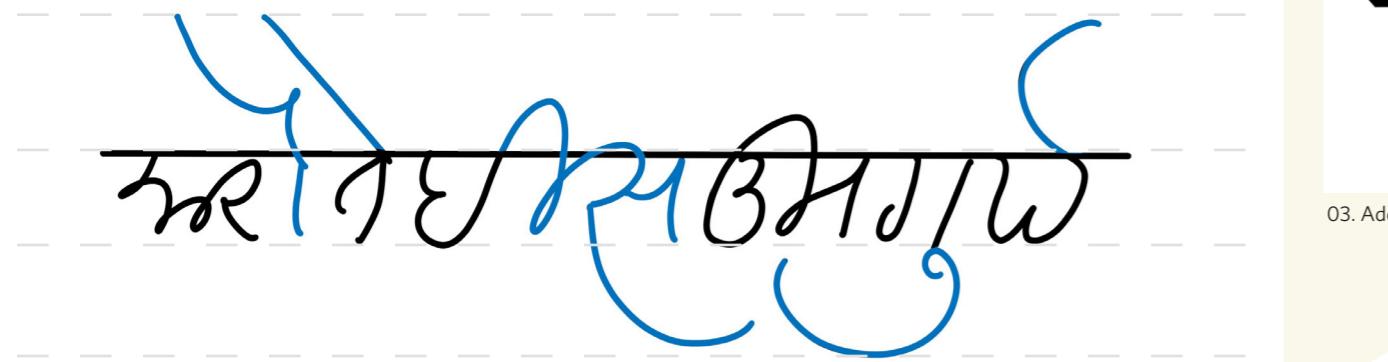
03. Added visual weight

## Peshwekalin Modi

Influence Unidentified. Styles like Chitnisi, Bilavalkari, Mahadevapanti, and Ranadi were born

Evolved cursive Letters flow seamlessly into one another

Consonant cluster Compact characters



Character anatomy Increased legibility. Certain characters have elongated terminals. Letter : Matra Proportion- 1:1.5

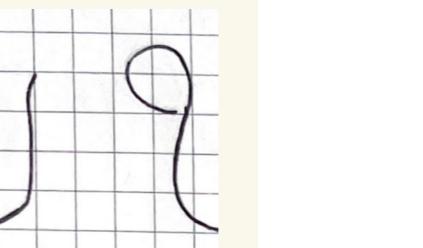
Extent Found in Maharashtra, Rajasthan, and Tamil Nadu.

Word spacing More word spacing observed than in previous eras

## The Process



01. Letter identified from samples



02. Reconstructing skeleton from samples



03. Added visual weight

## Anglakalin Modi

Decline Socio Political Changes (British Raj) - The use of Modi declined due to influence

Writing System Modi was also written in cursive, as well as Latin

Consonant cluster Spaced cursive characters

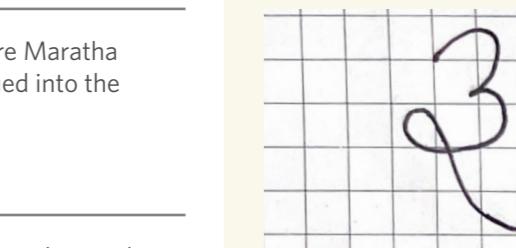
Word spacing More word spacing observed than previous eras.



## The Process



01. Letter identified from samples



02. Reconstructing skeleton from samples



03. Added visual weight

# *Style Development*

---

- Exploring Styles
- Testing
- User Assessment
- Comparative Study of Styles
- Proposed Style

# Exploring styles

## Reed Pen (boru)

Variations

- 1. Fine
- 2. Medium
- 3. Italic

Tone of voice

Humanistic  
Slightly informal

Type

Display  
Body Text



## Calligraphy pen

Variations

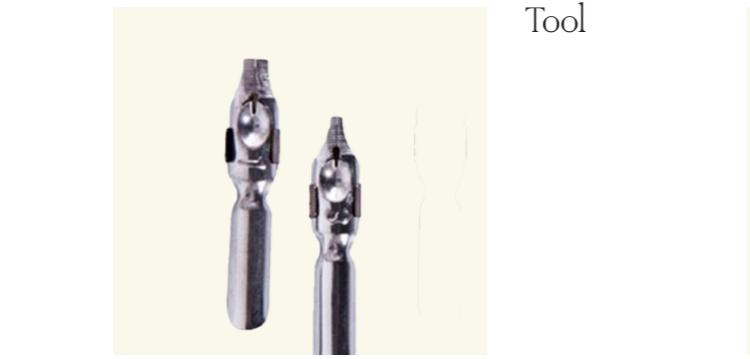
- 1. Latin calligraphy slant
- 2. 180-degree angle

Tone of voice

Playful  
Expressive

Type

Display



## Monolinear Pen

Variations

- 1. Round Thin

Tone of voice

Clean  
Minimalist  
Geometric  
Modern

Type

Body Text



## Testing Samples

- 01 Reed pen Fine
- 02 Reed pen Medium
- 03 Reed pen Italic
- 04 Latin calligraphy Slant
- 05 180-degree angle
- 06 Monolinear round

## User Assessment

## Reader's Top Choices

Reed pen Fine

ମେଘମହାଦୂର୍ବଳାମା

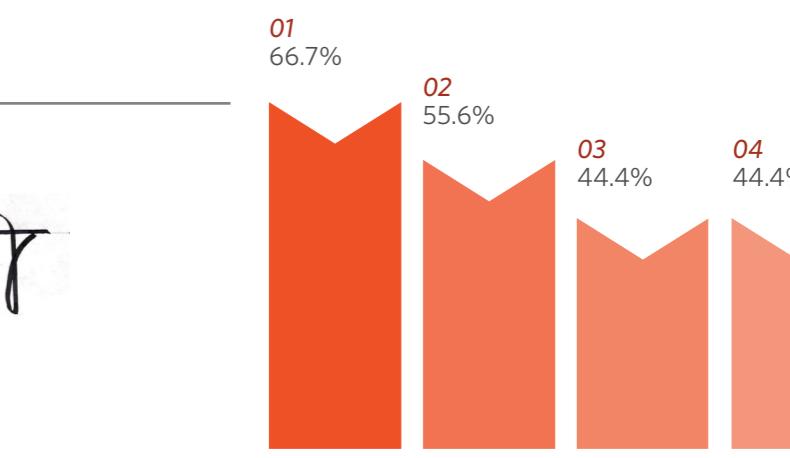
Calligraphy pen 180° angle

# ମାତ୍ରାମ୍ବଲ୍ଲମ୍ବାଦୀପାତ୍ର

## Monolinear round

ମଧ୍ୟମାତ୍ରାରେ ମାତ୍ରାରେ ମଧ୍ୟମାତ୍ରାରେ

## Key Aspects of Modi for Us



01

101 02 Culturally Sig

---

03 Aesthe

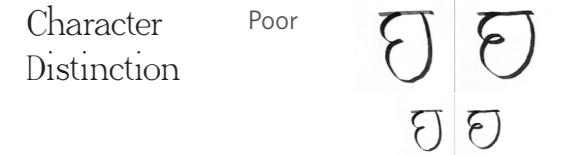
04 Variability (suitable for various applications)

# Comparative Study of Styles

## Reed Pen Fine



Weight, Contrast  
Light  
High contrast



Historical Accuracy  
High

Impression  
Clean, Flowy, Organic, Delicate

## Reed Pen Medium



Weight, Contrast  
Semibold  
Moderate contrast



Historical Accuracy  
High

Impression  
Bold, Striking

## Reed Pen Italic



Weight, Contrast  
Medium  
High contrast



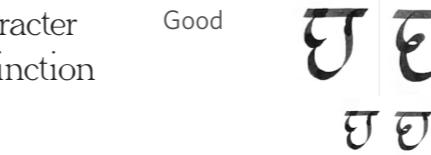
Historical Accuracy  
High

Impression  
Messy, Hard to read

## Latin Calligraphy Slant



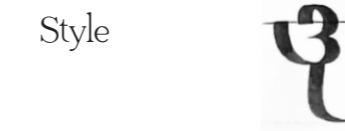
Weight, Contrast  
Medium  
High contrast



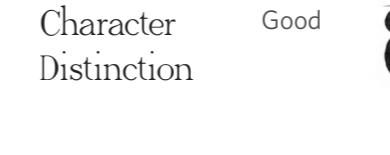
Historical Accuracy  
Limited

Impression  
Hazy, Unclear, Straining

## Calligraphy 180° angle



Weight, Contrast  
Bold  
High contrast



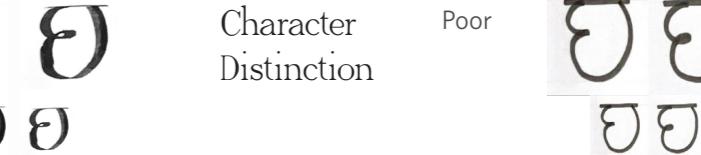
Historical Accuracy  
Limited

Impression  
Unique forms, Geometric, Bold, Modern

## Monolinear Round



Weight, Contrast  
Thin  
No contrast



Historical Accuracy  
Moderate

Impression  
Soft, Clean, Minimalist

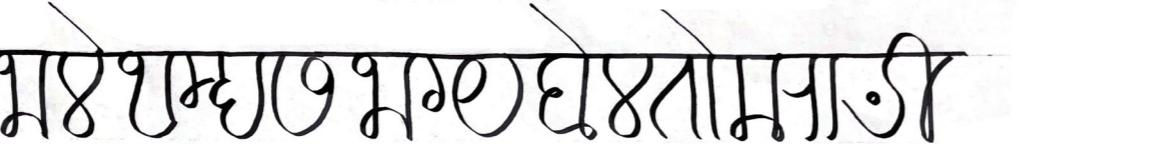
## Iterations

The reed pen fine style (see 01), favored for its clean, flowing, organic, and delicate impressions was a problem because of its lightweight nature. They compromised readability and character distinctiveness in the letterforms, which ended up being thin and had high internal contrast.

To solve this, iterative adjustments to the original weight were made- 50% increase (02), 100% increase (03), and 150% increase (04). By increasing its weight by 50%, we were able to produce an enhanced weight in a style while keeping the organic aesthetic. Nevertheless, the 100% weight and 150% weight increased styles were well above the original reed pen fine style in contrast but still did not reach the highest contrast level of the resulting styles obtained with the original fine and the smooth styles. However, these modified styles lead to readability issues and undesirable contrast.

*The comparative analysis on the various Modi script styles based on the user requirements and critical insights thus lead us to choose the 180 degree angle style as unsuitable based on which we discarded it.*

01



02



03



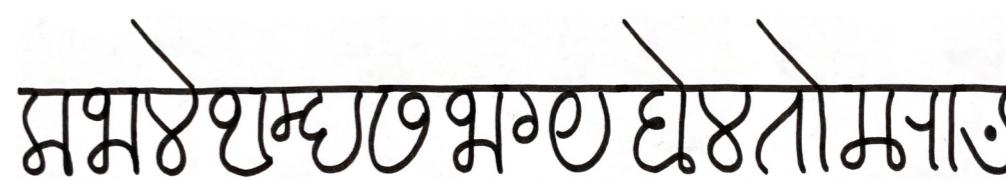
04



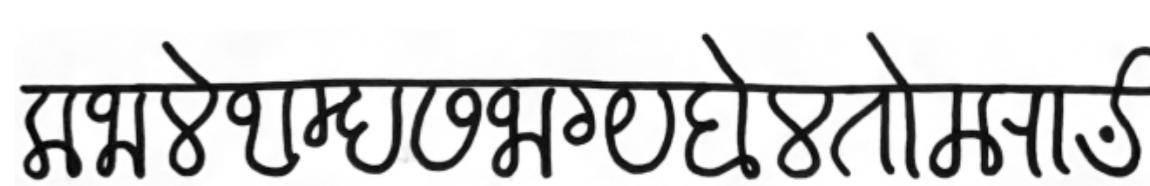
Third in preference was the mono-linear round style (see 05) with a soft, clean and minimalist aesthetic. In terms of stroke weight, this style lacked internal contrast; the stroke weight was consistent from letterform to letterform. However, reading was difficult if scaled down because of its light weight, which called for a 100% increase in stroke weight to make legible (see 06).

Particularly, the mono-linear character of this style meant the degree of character difference was lower than in the modulated styles, where stroke variations increase character distinctiveness.

05

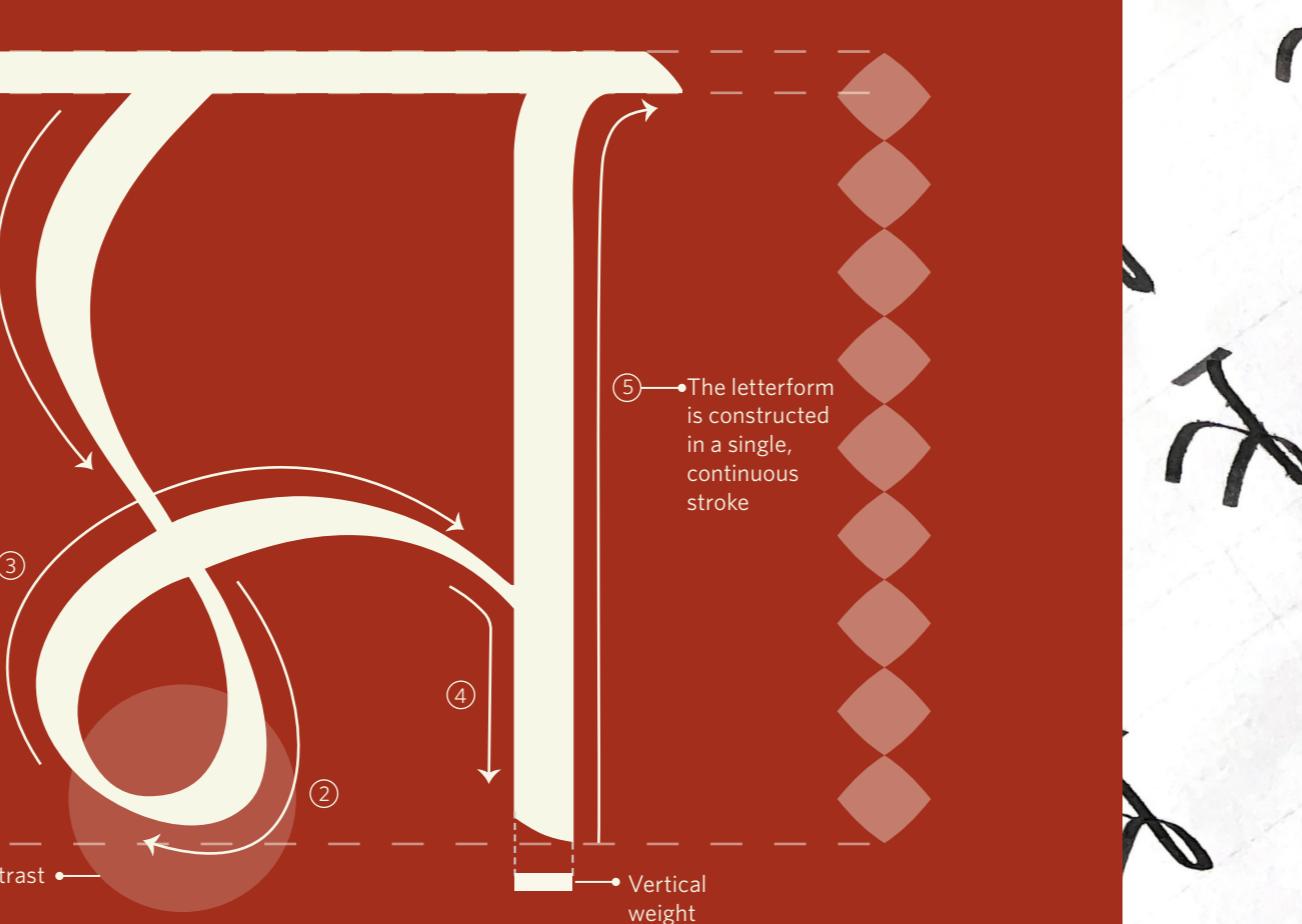


06



# Proposed Style

Impression	Clean, Organic, Humanistic, Delicate
Historical Accuracy	High
Style	Regular Bold Slant
Contrast	Modulated
Impression	Clean, Organic, Humanistic, Delicate



## Learning orthography

Working through Moiré orthography and alphabet anatomy needed dedicated practice. Letterforms were meticulous written, following the basic guideline. Character height and weight specifications, together with optimal calligraphynibis, were chosen. This method of focus helped build the structure of the script in its written form.

# *Character Design*

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- Similar Forms
- Glyph Cards
- Designing in FontLab
- Final style
- Font Design Workflow
- Final Typeface

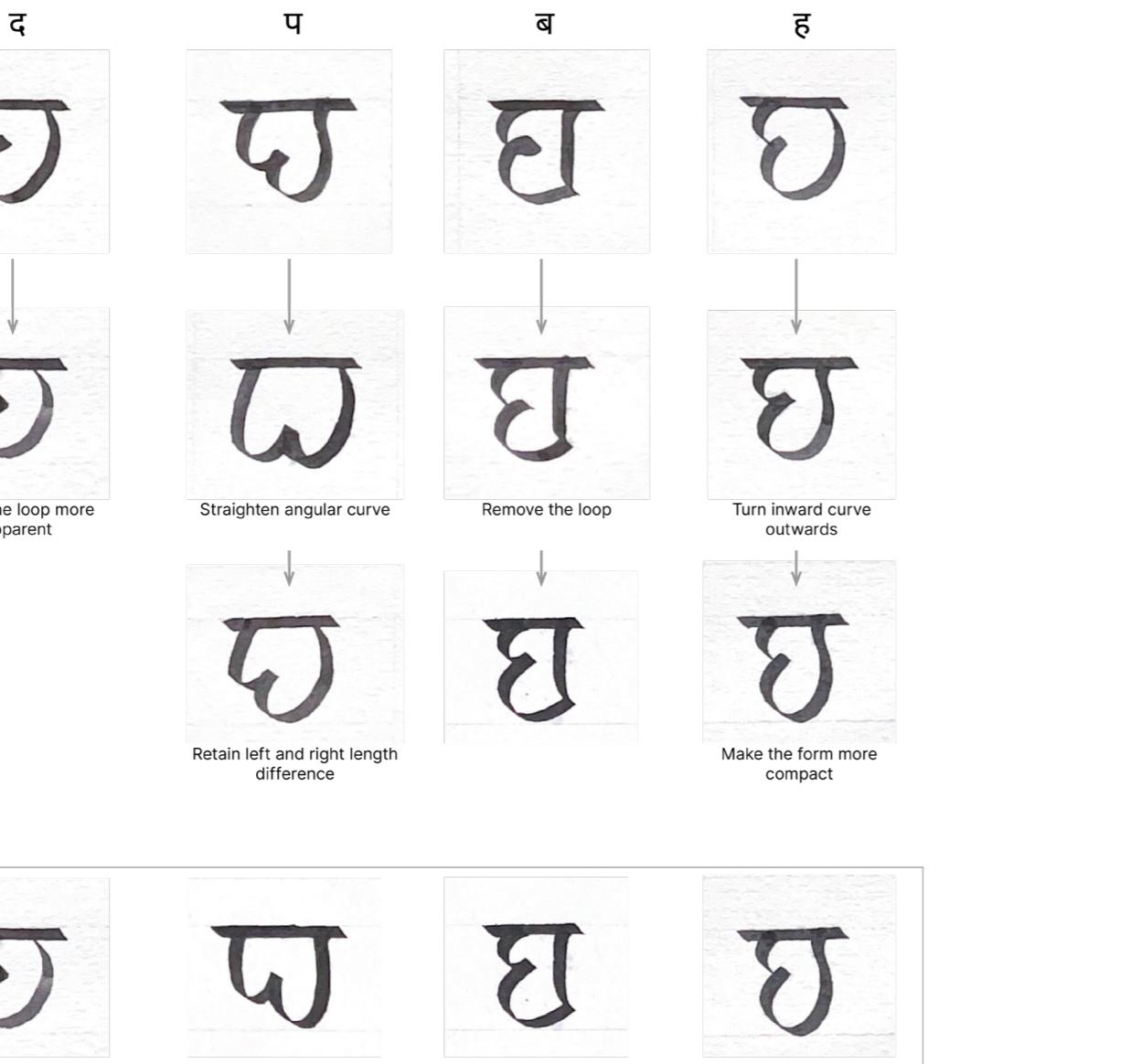
# Similiar Forms

A major problem in the process of character recognition is the same visually similar letter forms in the Modi script. The fact that the principal record of Modi letterforms is only in handwriting and etchings, the variants and inconsistencies in the latter rendering the issue worse.

As a result, multiple renderings of these letterforms were a necessary core objective to make differentiation between characters relatively easy and retain their original anatomy. Such instances were addressed by means of a comprehensive approach.

## Case 1

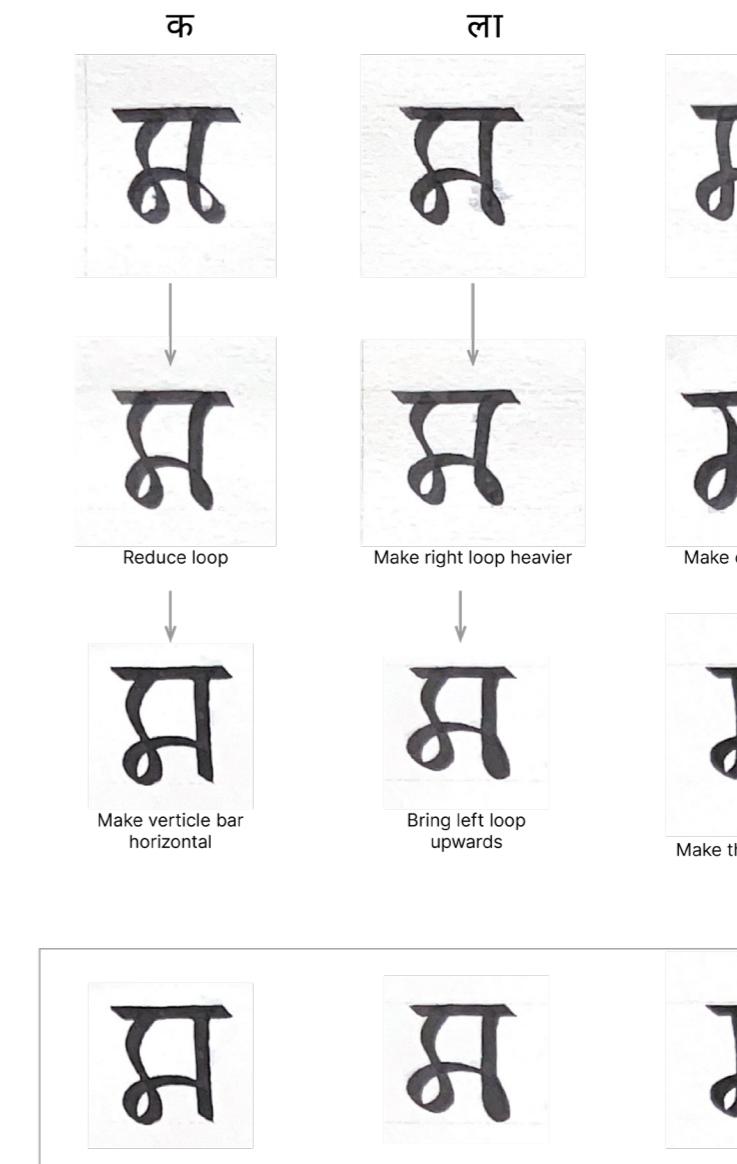
Modi letters द, प, ब, and ह resemble each other so visually, and their double loop on the left side is particularly striking. These distinguish themselves subtly by the shape of the knot formations and, secondly, by the left side of those connections. This was done to make the knot/loop formations were modified and, the rightside connections changed to provide a clear visual separation.



## Case 2

At sight, the Modi letters क, ला, and म are visually similar, in particular in their loop formations. The shape of the bottom loops plus the curvature of the left stroke that forms the bottom loops are the distinguishing features. Thus, we introduced a filled loop as a visual indication of the 'T' matra, and have used it to establish a standardized anatomical representation of characters.

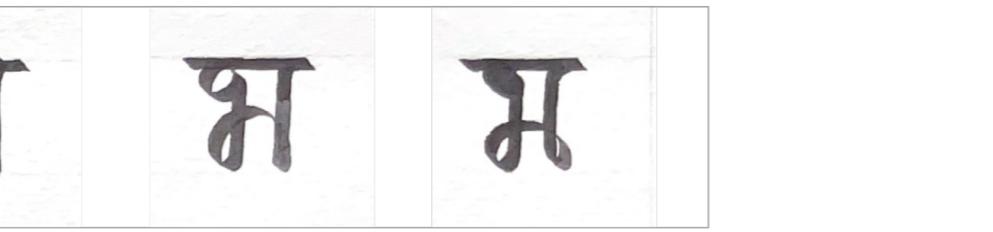
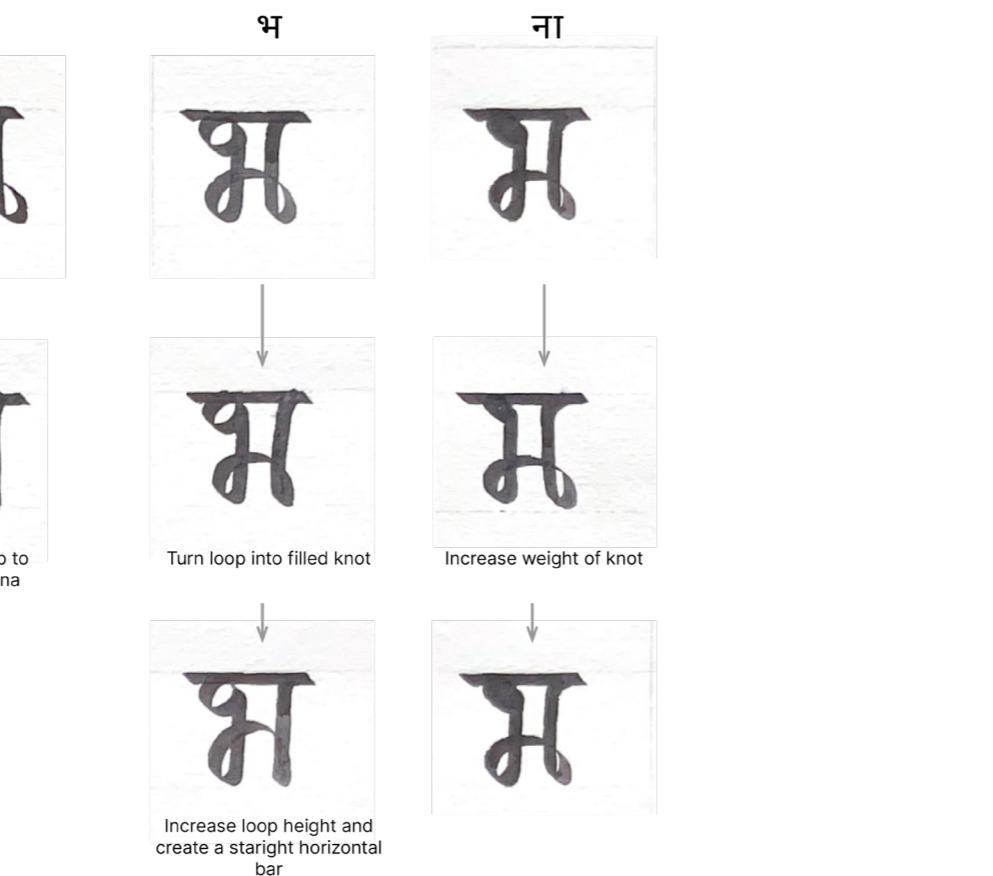
In cases of ambiguity enabled by the loop, the loop was strategically disallowed to simplify the letterform and resolve ambiguity.



### Case 3

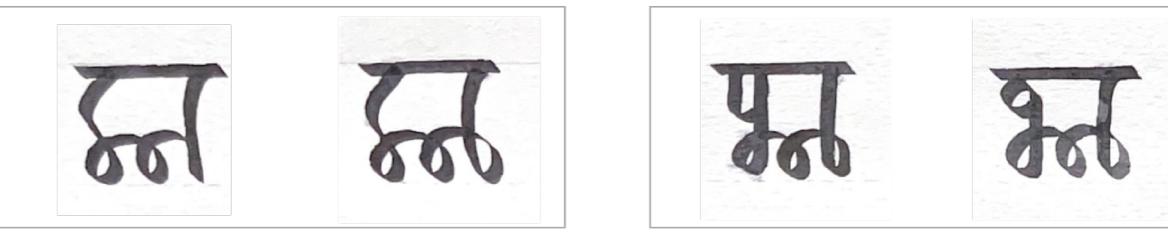
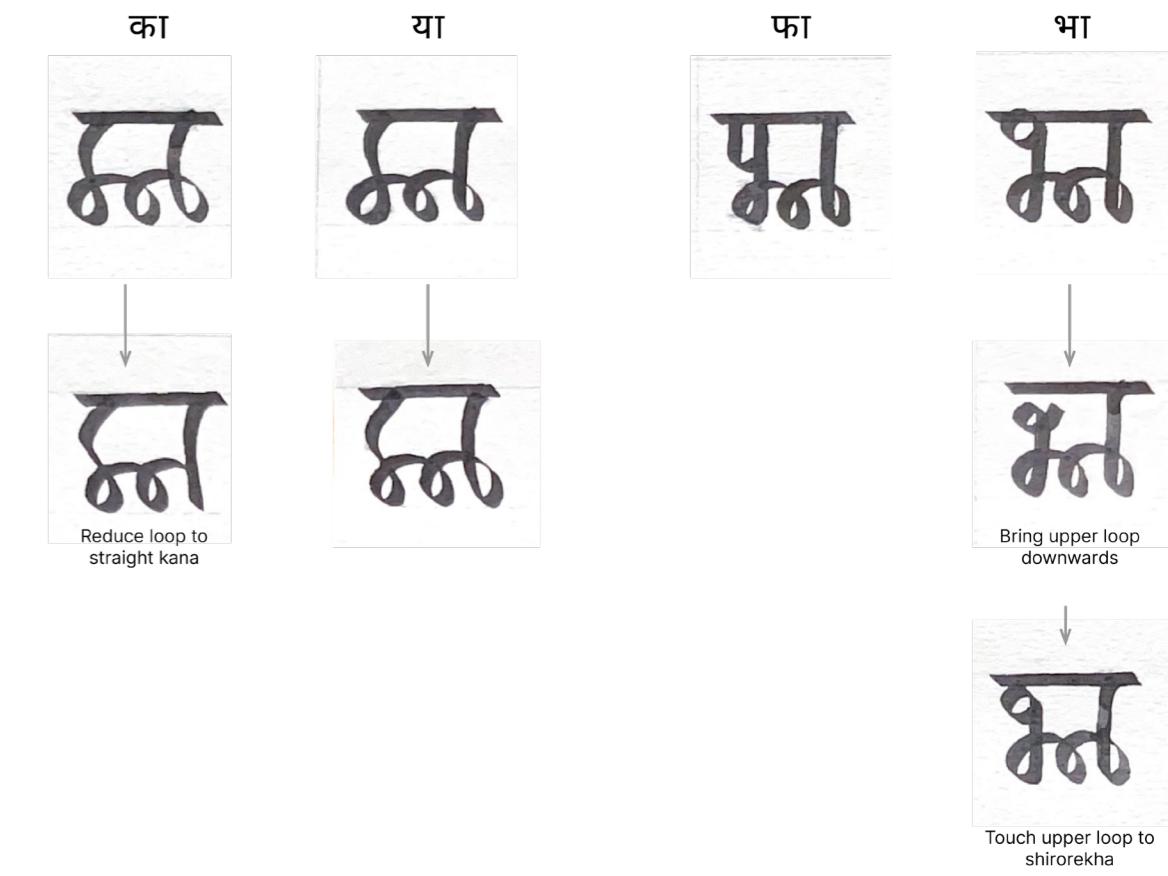
The Modi letters **ஃ**, **ஃ**, and **ନା** show visual similarity, mainly in their upper loop formations. In the close resemblance of the loop structure, **ஃ** and **ஃ** are specifically exhibited. The curvature and length of these loops were modified so as to improve visual differentiation.

Additionally, with regards to these otherwise similar letterforms, the left stem of the **ନା** character was adjusted so that by creating curvature in it, a clearer boundary was made between these letterforms.



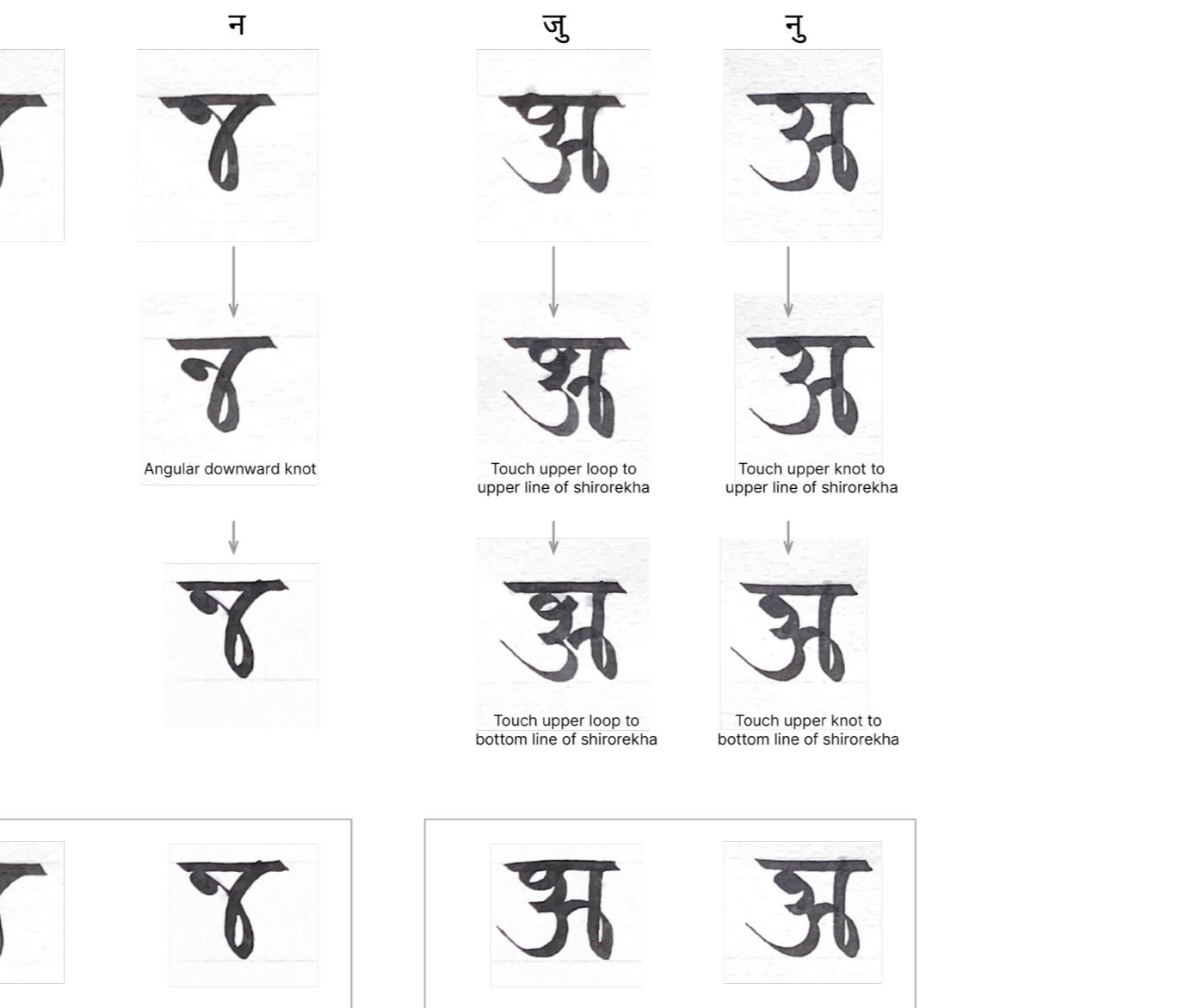
### Case 4

Such principles are applied to the root letter forms in the same way as those for their respective Modi letters **କା**, **ୟା**, **ଫା**, and **ଭା**. Because of this, the modifications used to recognize the foundational characters (କ, ଯ, ଫ, and ଭ) are seen in all these vowel modified and conjunct forms, creating a unified and memorable visual language in the script.



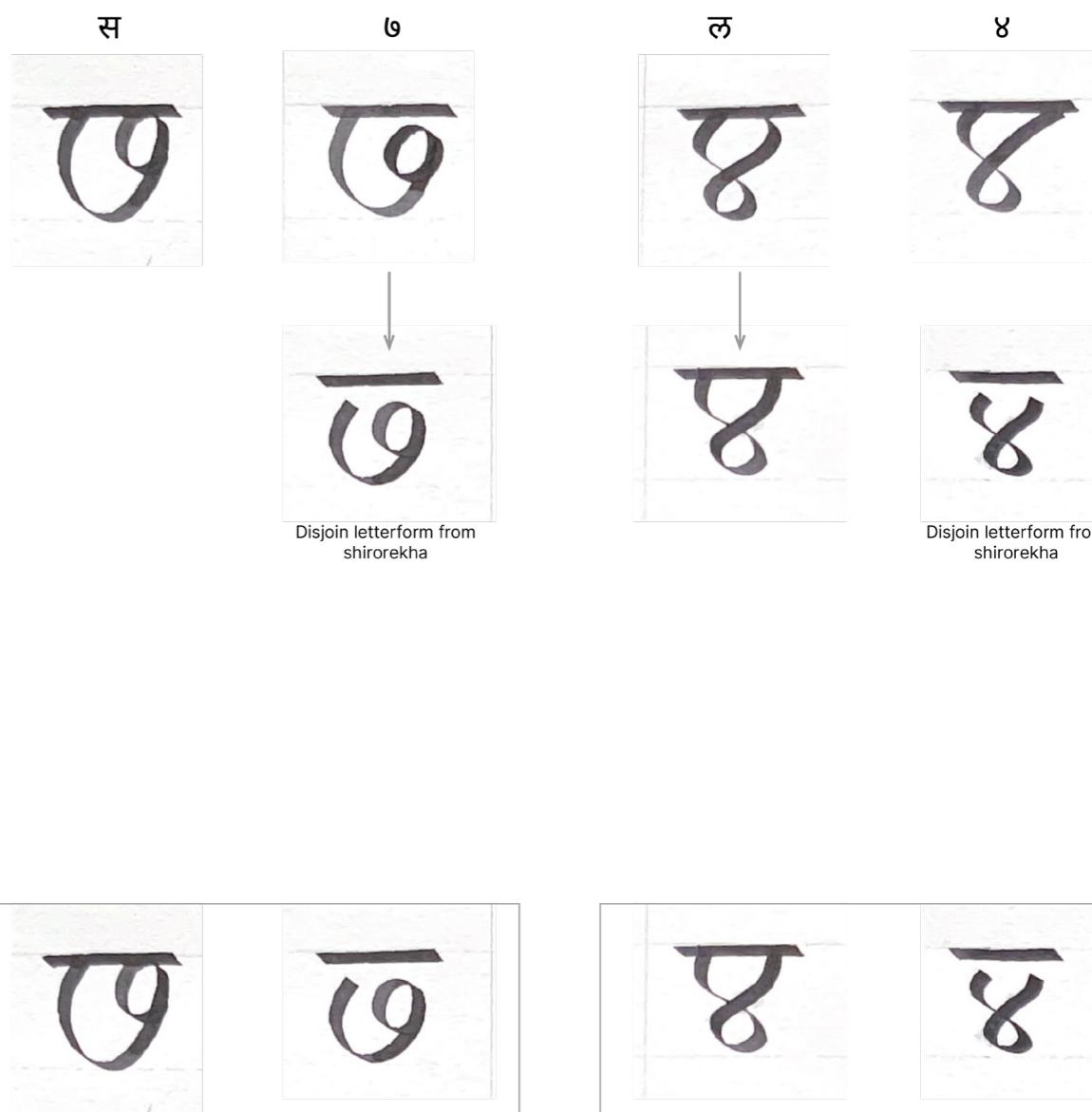
### Case 5

The Modi letters ज, न, झु, and नु can be confused because they share the same upper left loop formation. In order to make it more distinctly visible, the size of ज was increased and for नु, the vertical position of closed loop was reduced. The adjustment here was made to sense more immediately the characteristics of the loop and therefore increase character recognition.

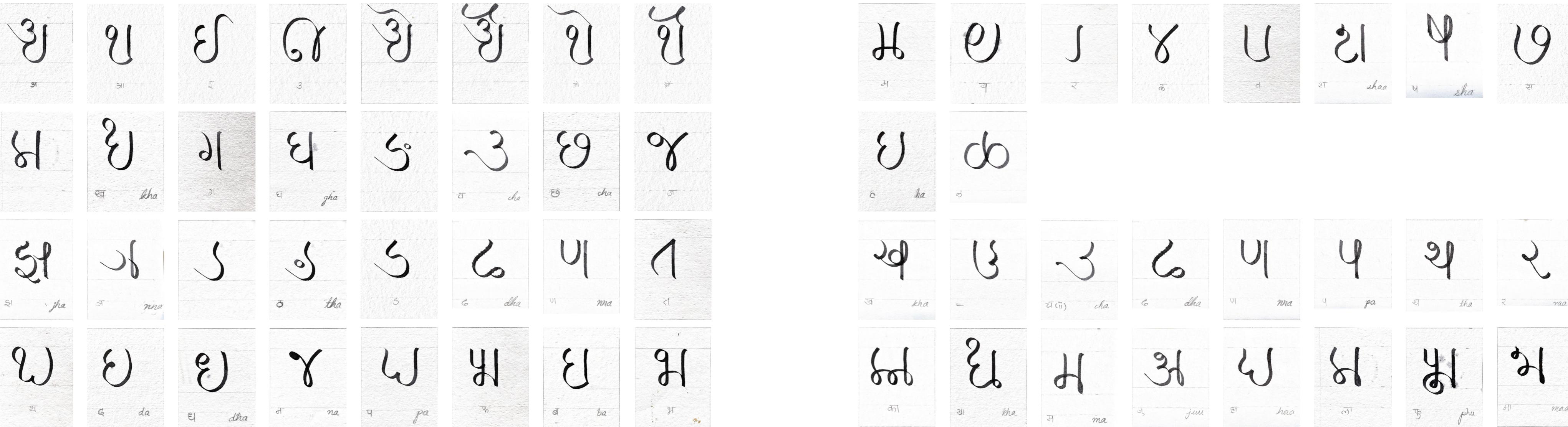


### Case 6

Modi letter स like numeral 7 letter ल and numeral 4 also have same form which makes it difficult to identify. The shirorekha also would be detached from the numerals so that they might be distinguished visually. By separating the two deliberately, the visual cue made identifying the numbers distinct from the corresponding letters.



# Final Glyph Cards



A row of six handwritten Devanagari characters on lined paper. Each character is followed by its name in English and Devanagari script. The characters and their names are: 1. अ (a) 2. ओ (o) 3. इ (i) 4. आ (aa) 5. उ (u) 6. ऊ (oo).

O 9 2 3 8 4 5 6 0 7

The image shows two handwritten cursive letters on white paper with blue horizontal lines. The letter 'c' is on the left, written in a bold, black ink. The letter 'e' is on the right, also in bold black ink. Both letters are written in a fluid, cursive style.

Three handwritten Indonesian characters are shown on separate lines of lined paper. The first character, 'k', is written in a bold, italicized script. The second character, 'x', is also in a bold, italicized script. The third character, 'y', is written in a similar bold, italicized script. The characters are positioned in the middle of each line, with a small gap between them.

A row of eight handwritten digits in cursive script, each with a vertical line to its right. The digits are: 6, 7, 8, 9, 0, 2, 3, and 4. The digits are written in a fluid, connected style, with the vertical lines extending downwards from the top of each digit.

A row of seven photographs showing handwritten cursive letters on white paper with blue horizontal lines. From left to right: 1. A small, thin, downward-sloping curve. 2. A small, thin, upward-sloping curve. 3. A small, thin, downward-sloping curve. 4. A small, thin, upward-sloping curve. 5. A small, thin, downward-sloping curve. 6. A small, thin, upward-sloping curve. 7. A small, thin, downward-sloping curve. Below the first letter is the handwritten word 'z'. Below the second letter is the handwritten word 'Z'. Below the third letter is the handwritten word 'z'. Below the fourth letter is the handwritten word 'Z'. Below the fifth letter is the handwritten word 'z'. Below the sixth letter is the handwritten word 'Z'. Below the seventh letter is the handwritten word 'halant'.

3y

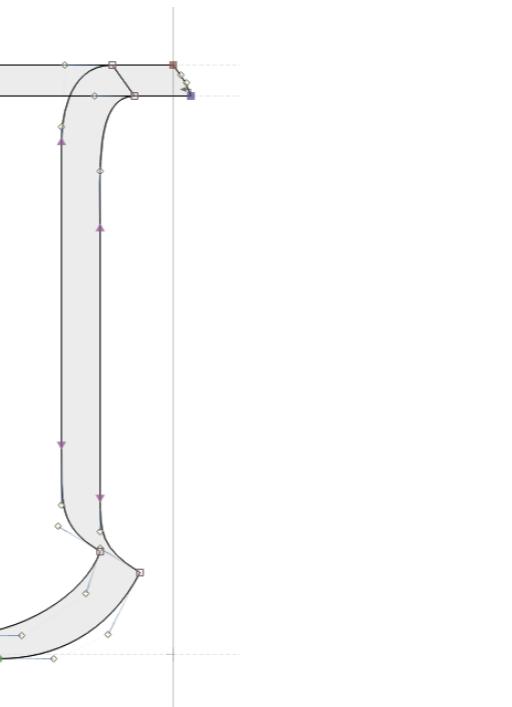
# Designing in FontLab

The subsequent phase involved glyph development within FontLab. To determine appropriate weight, width, and height parameters, a limited set of letterforms that showcased diverse forms and orthographic representations were designed.

## Glyphs



This subset included glyphs featuring detached, attached kana, loops, double loops, knots, curved stems, conjuncts. This approach enabled to conduct firsthand evaluations of readability and legibility of the glyphs across diverse forms.



# Reflection

The glyphs went through extensive research at different point sizes to detect orthographic irregularities. The analysis showed that the glyph weight caused visual unclarity which reduced readability primarily in tiny point sizes.

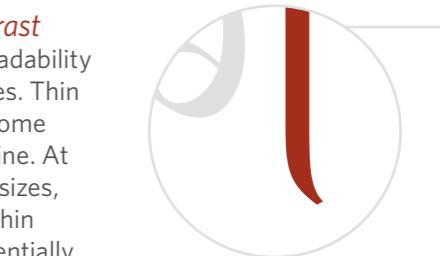
A disruption formed between counters and loops and knots caused the overall visual language of the font to break down.



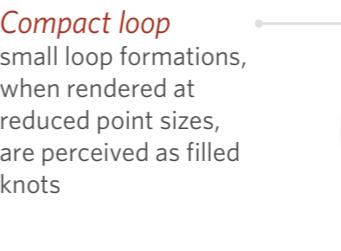
### High Contrast

hampers readability at small sizes. Thin strokes become extremely fine. At small point sizes,

these very thin strokes essentially disappear



**Visual Inconsistency**  
Certain letterforms featuring detached kana (stem) have inconsistencies that deviate from the established visual language



### Thin weight

glyphs demonstrate a

thin stroke weight



### Compact loop

small loop formations, when rendered at reduced point sizes, are perceived as filled knots



### Wide Counter

excessive counter space

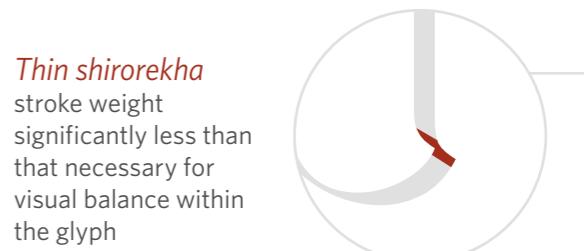
within the bottom loop

contributes to a visually imbalanced glyph



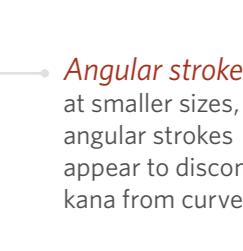
### Irregular angularity

angle of the slant is not consistently maintained



### Thin shirorekha

stroke weight significantly less than that necessary for visual balance within the glyph

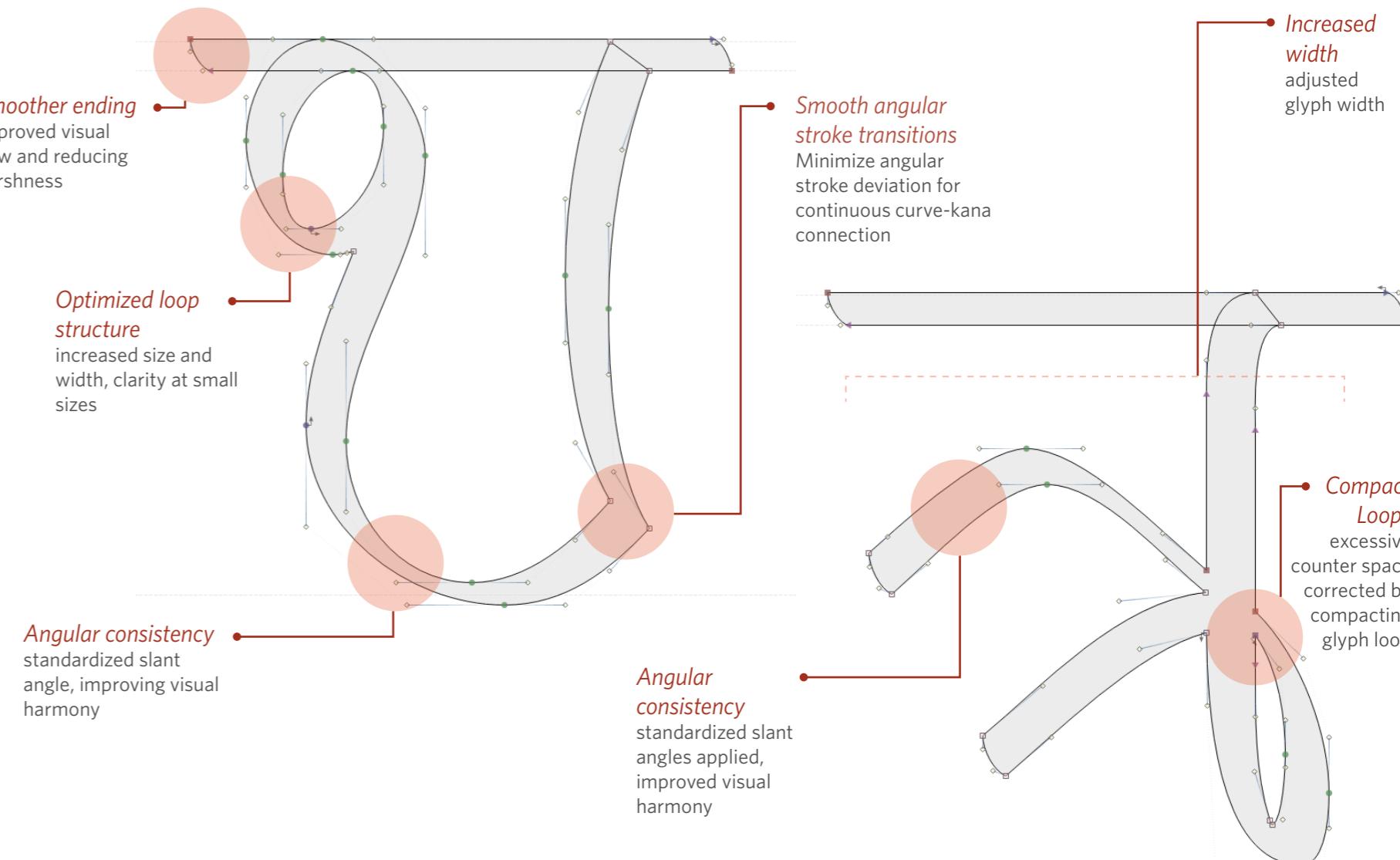
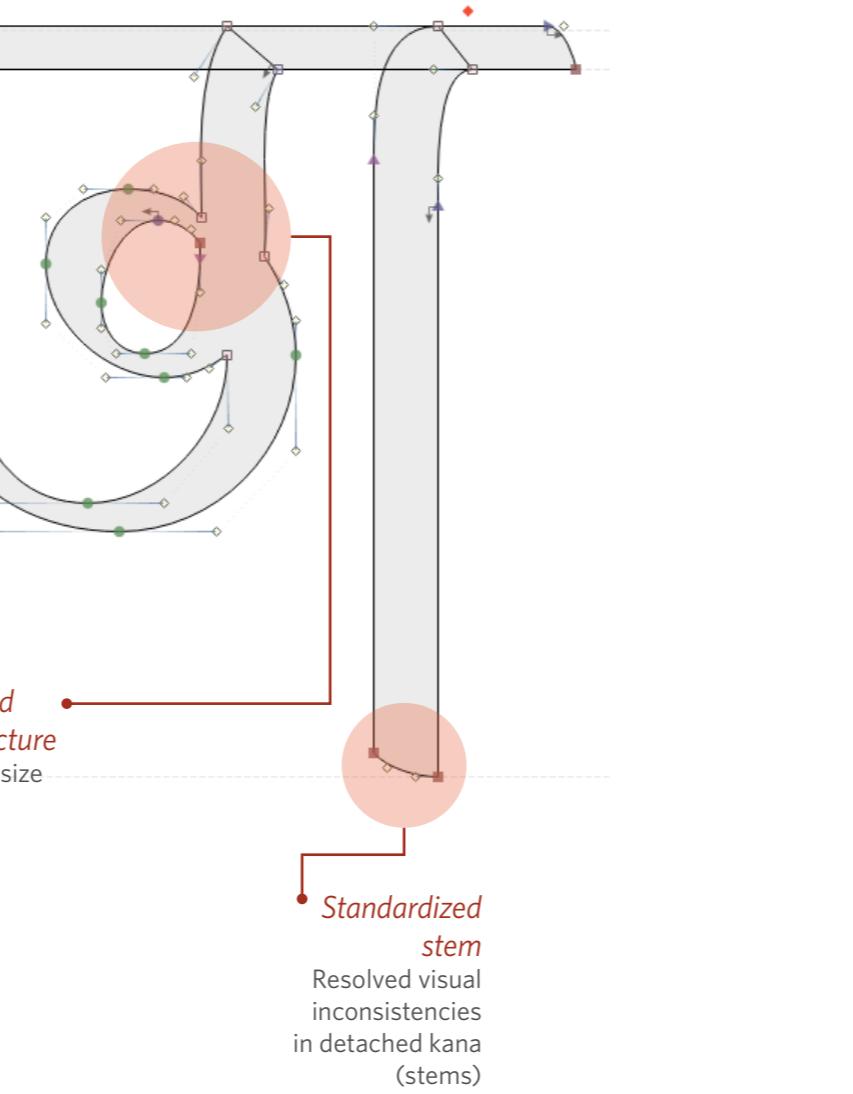
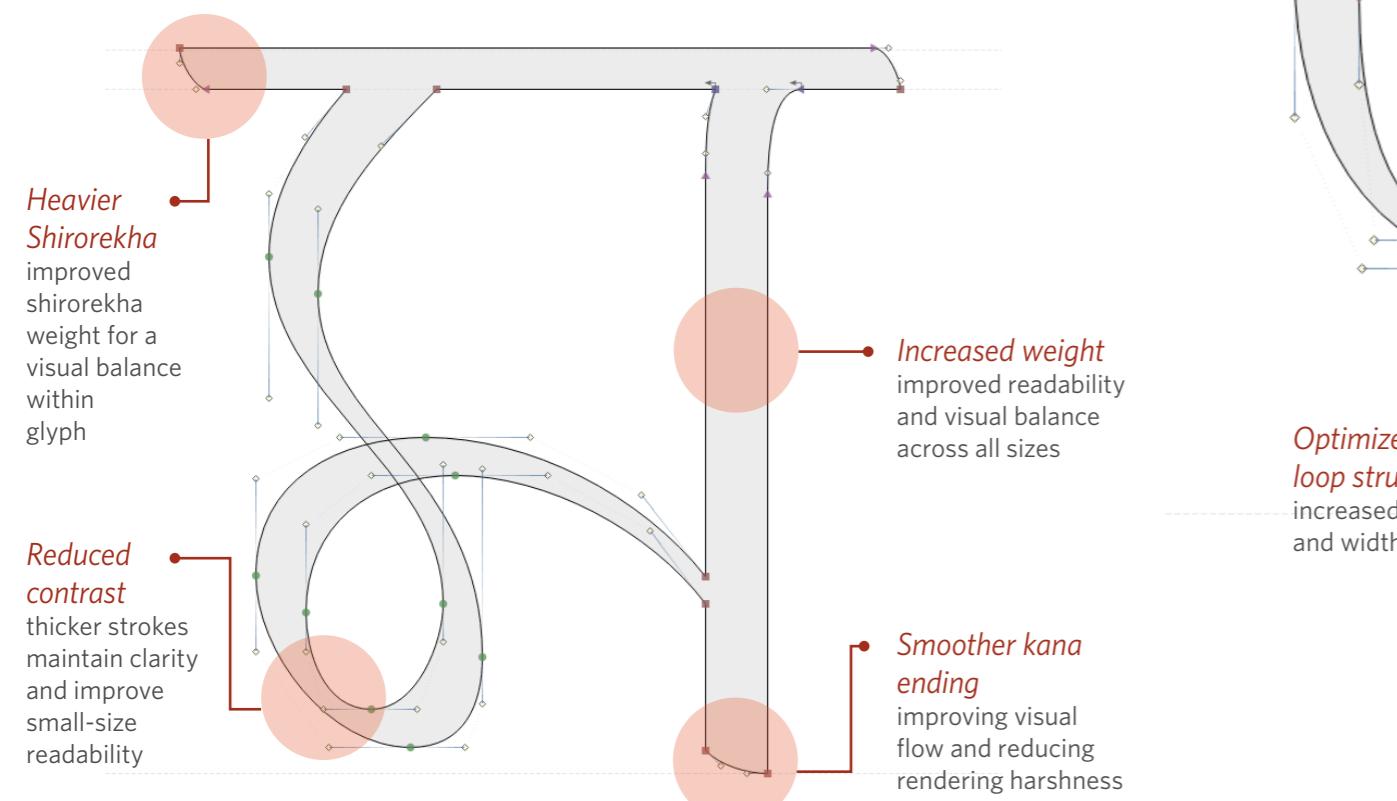


### Angular stroke

at smaller sizes, angular strokes appear to disconnect kana from curves

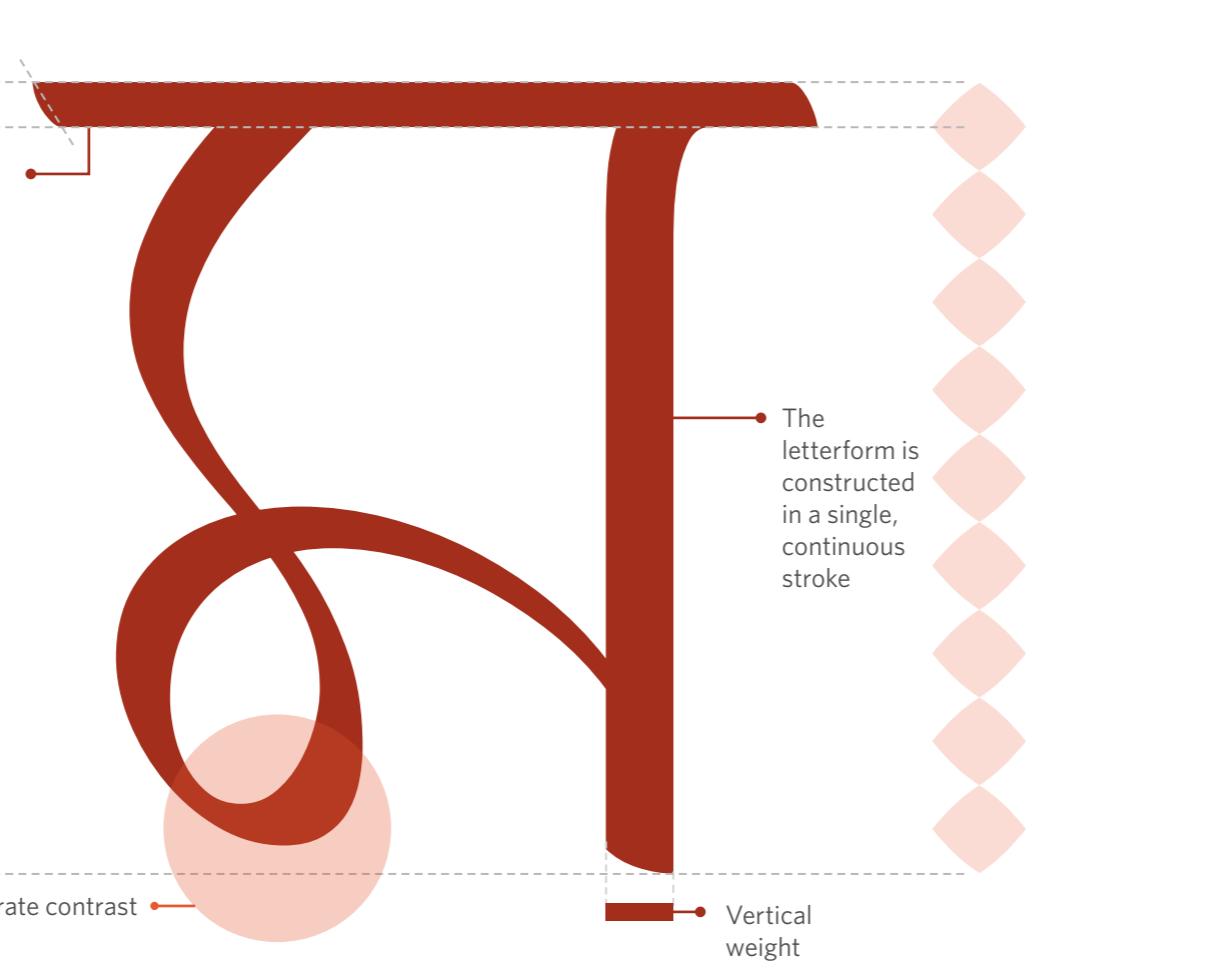
# Improvements

The font received critical glyph analysis that allowed developers to make improvements which boosted the visibility of characters and readability. The extension of weight and character width improved visual clarity because of vision problems.

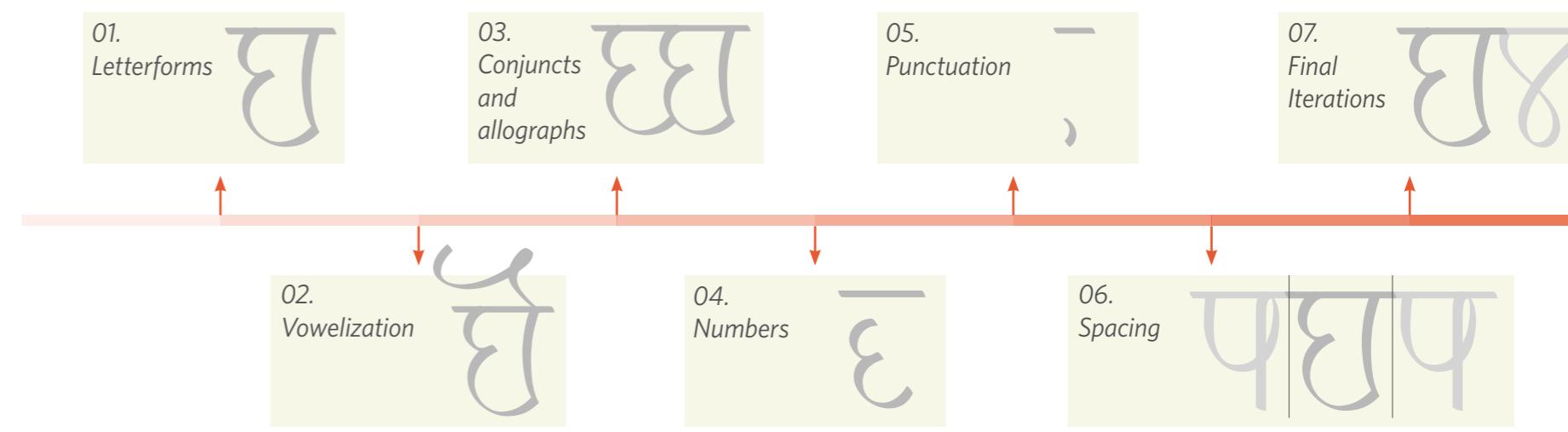


# Final Style

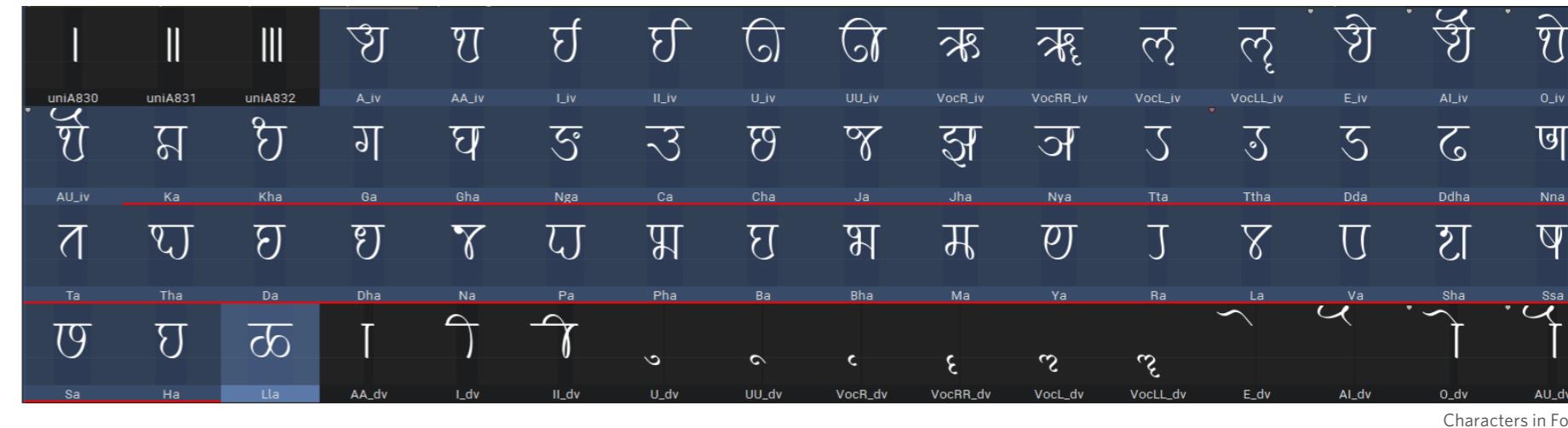
Impression	Clean, Organic, Humanistic, Delicate
Historical Accuracy	High
Style	Regular Bold Slant Ink
Contrast	Modulated
Impression	Clean, Organic, Humanistic, Delicate



# The Process

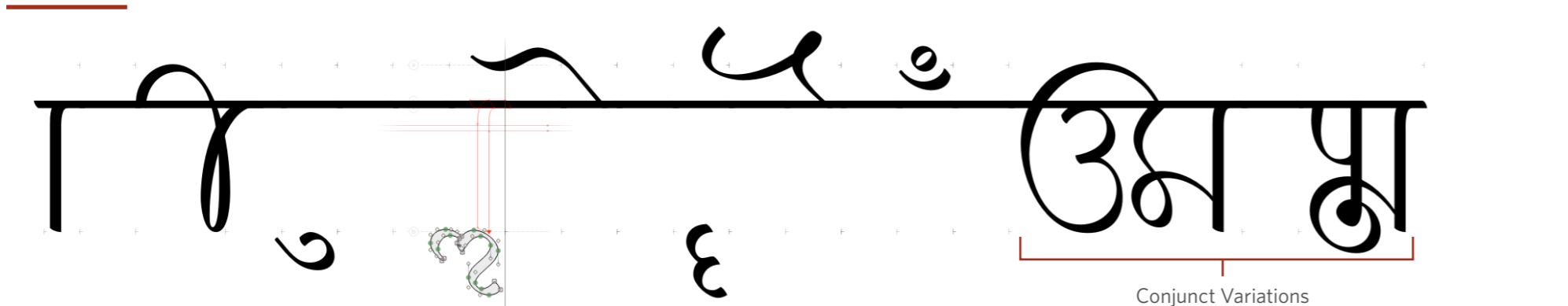


## 01. Letterforms



Characters in fontlab

## 02. Vowelization



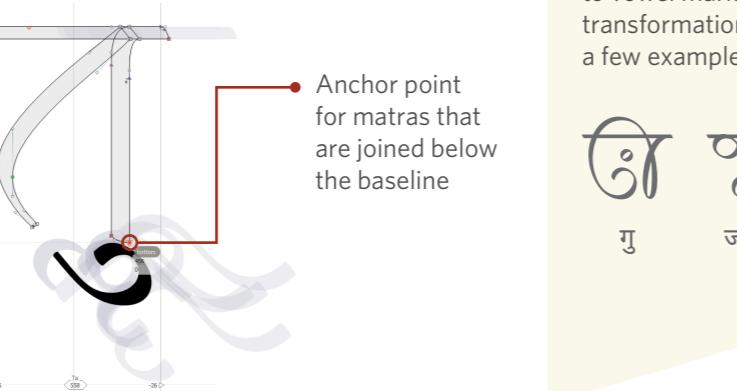
Modi utilizes a system of vowel-consonant conjuncts. This means that vowel sounds are often represented by diacritical marks (matras) that are added to consonants. These matras can be positioned above the shirorekha (the horizontal line running across the top of the letters) or below the baseline, depending on the specific vowel sound.

However, the characters for short (hrasva) and long (dirgha) 'ekar' (े, ॥) and 'ukar' (ु, ॥) are identical, as well as their diacritical marks.

The rendering of the diacritical marks themselves is important. The image above shows the visual style of the matras, how curved, straight or looped they are, and how they relate to the general visual language of the typeface.

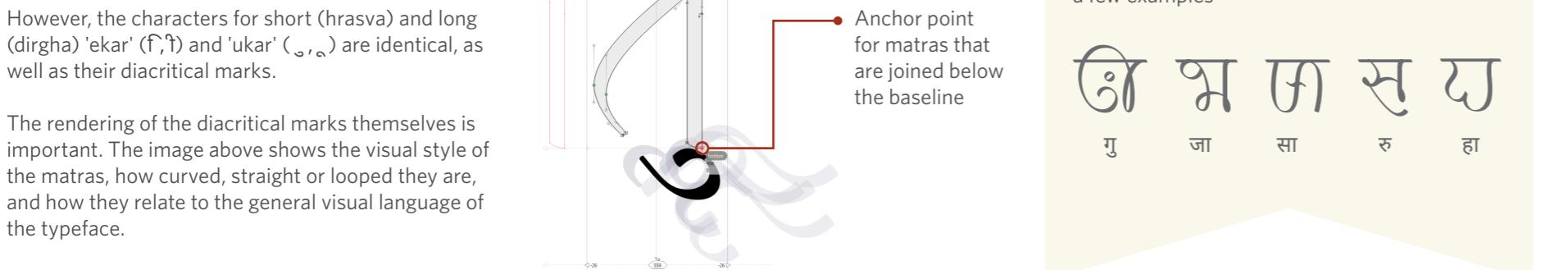
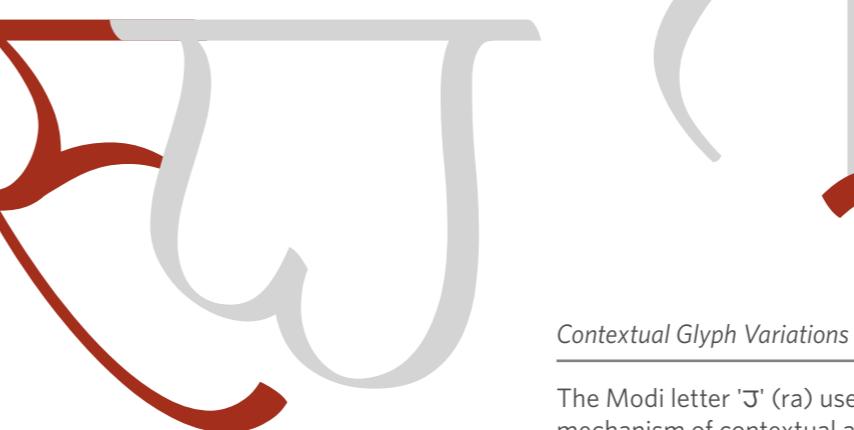
### Anchoring the marks

The position of diacritical marks becomes precise through anchor points which creates balanced and visually attractive character designs.



## 03. Conjuncts

Modi utilizes a system of vowel-consonant conjuncts. Like most Indic scripts this means that vowel sounds are often represented by diacritical marks (matras) that are added to consonants.



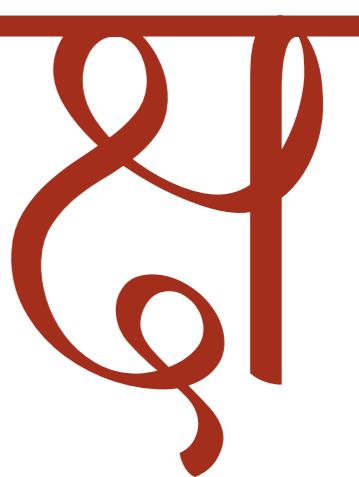
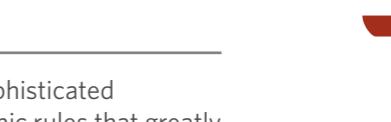
### Half consonants

Some consonants of the modi script follow the half letter (halant) forms as seen in Devanagari. Specific consonant forms are employed to indicate the suppression of the inherent vowel. The modified versions of complete consonants function as indicators for their pronunciation within letters.



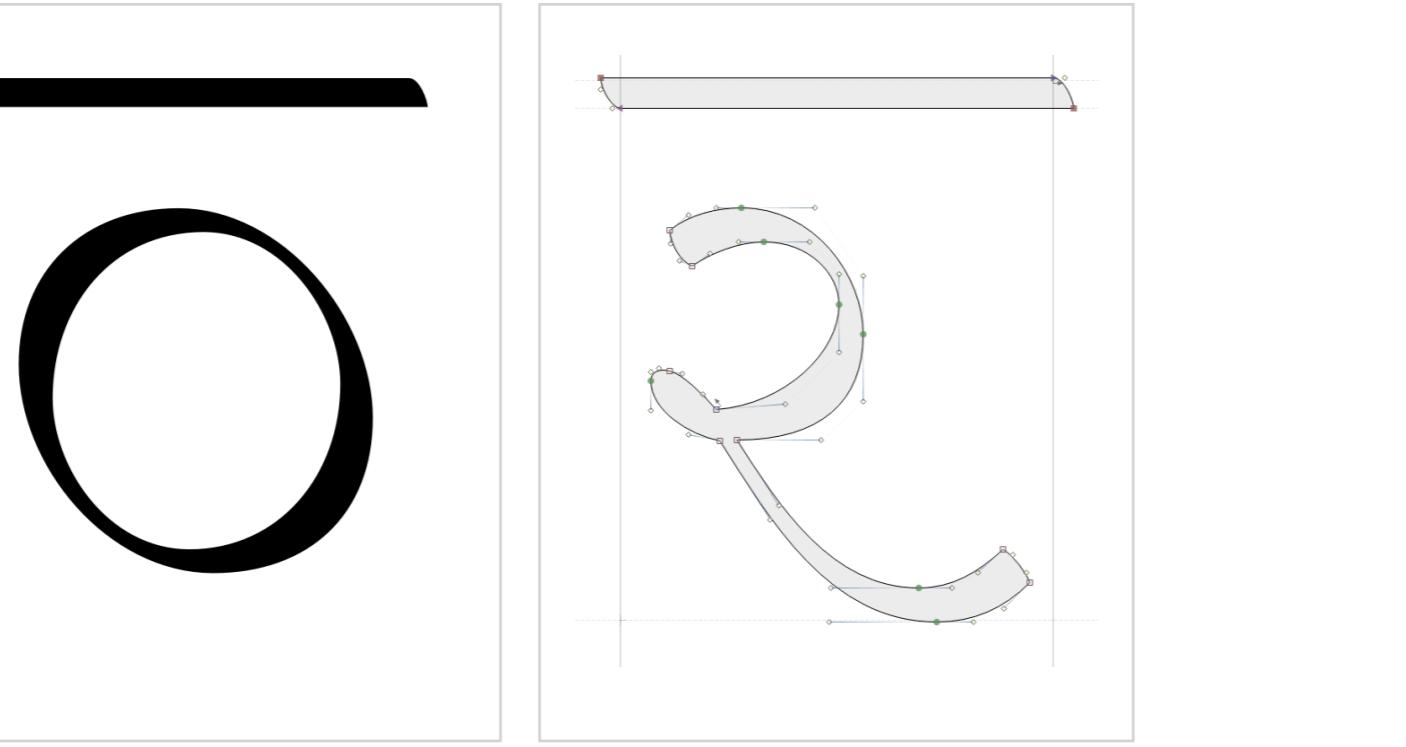
### Contextual Glyph Variations

Most consonant clusters in follow standard creation patterns yet some sequences produce substantial irregularities between their original parts. The letters र and श demonstrate exceptional development because they transform into completely new independent glyph forms. The transformations happen beyond basic consonant stacking because each new symbol evolves as a separate visual form that people need to learn on its own.



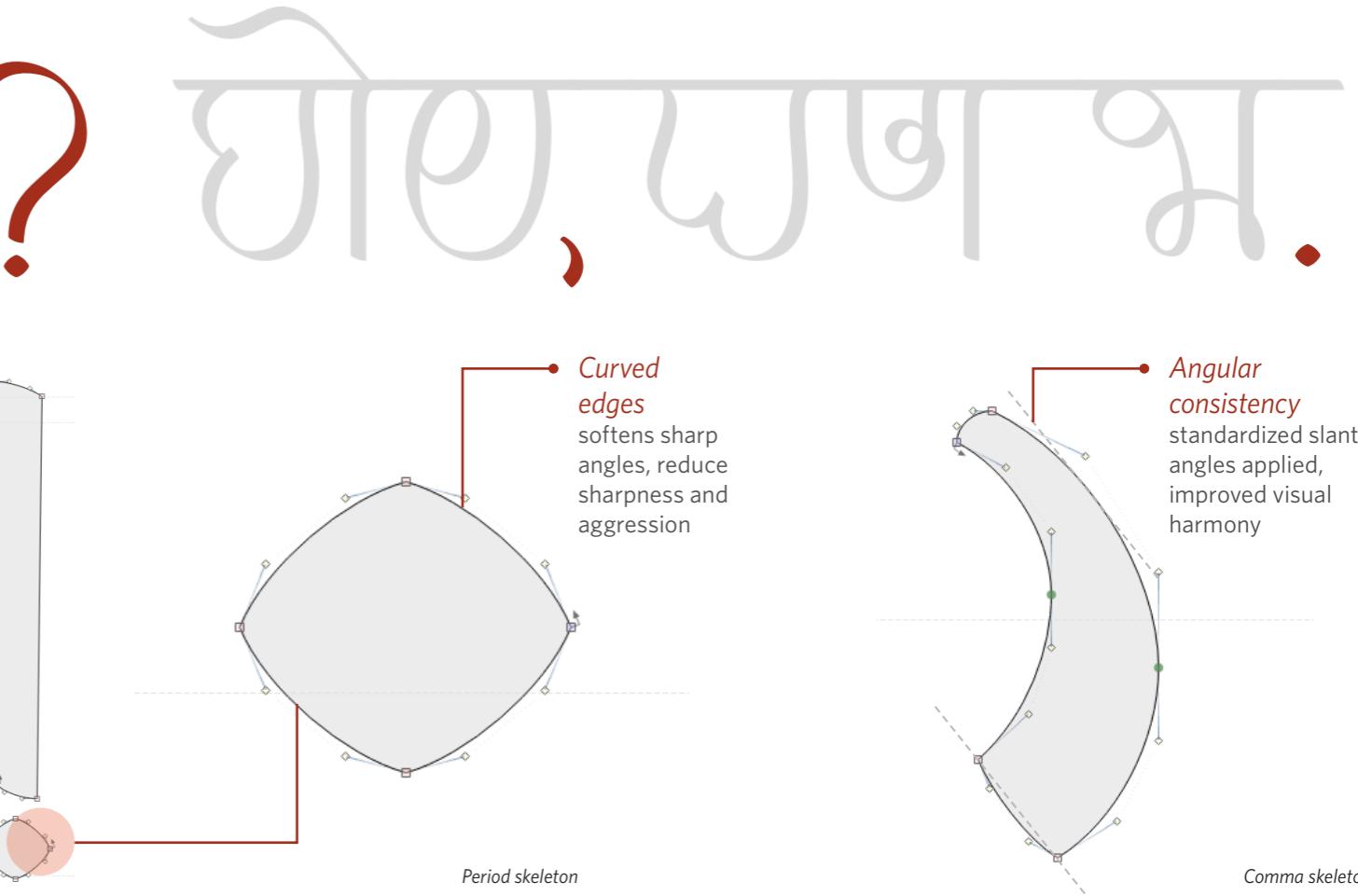
#### 04. Numbers

Due to their visual compatibility with Devanagari the Modi numerals experience additional complexities which stem from traditional writing methods of the past. Back in ancient times the positioning of numerals varied because of drawn shirorekha practice which either caused the numbers to touch or exist significantly lower than this line. To prevent confusion by spacing the Modi numerals differently since other characters shared similar shapes which could affect readability. The script adopts two different forms of numerals.

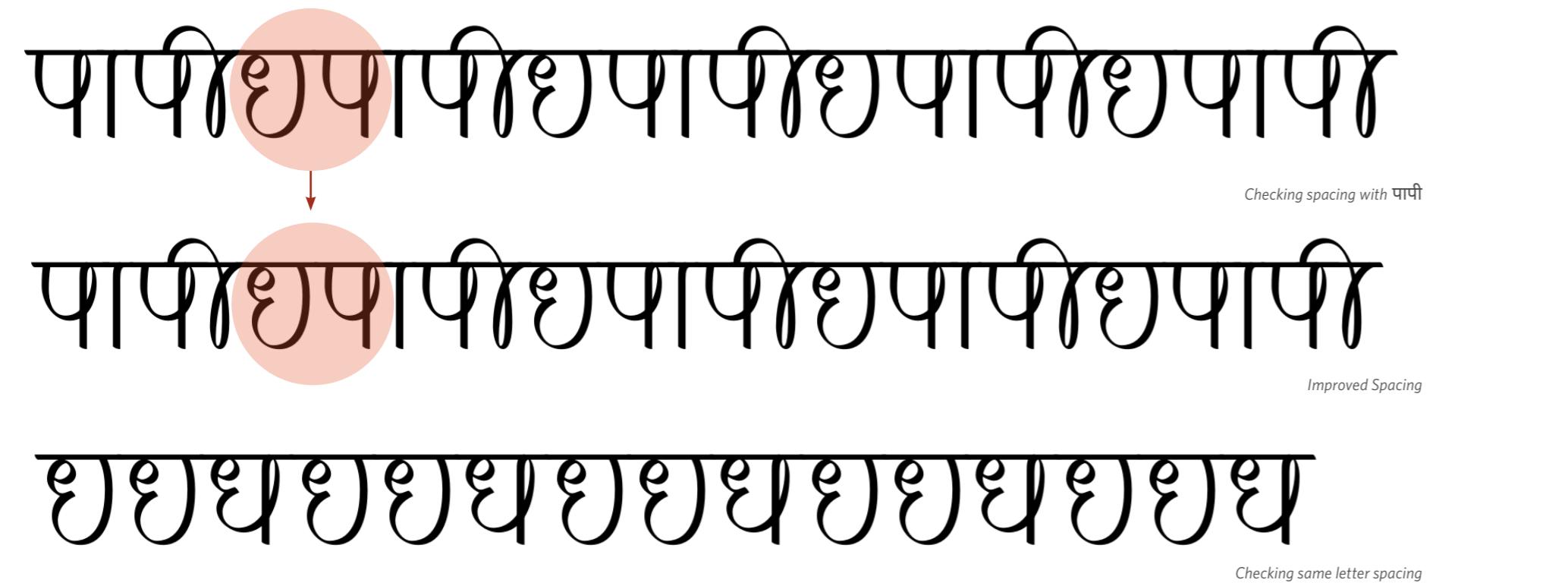


#### 05. Punctuations

Modi script typically does not utilize many punctuation marks. Standard punctuation needs to be used for contemporary transcription and translation according to current user requirements. Adding the complete punctuation system from modern Devanagari writing will enable effective communication in present-day situations.



## 06. Spacing

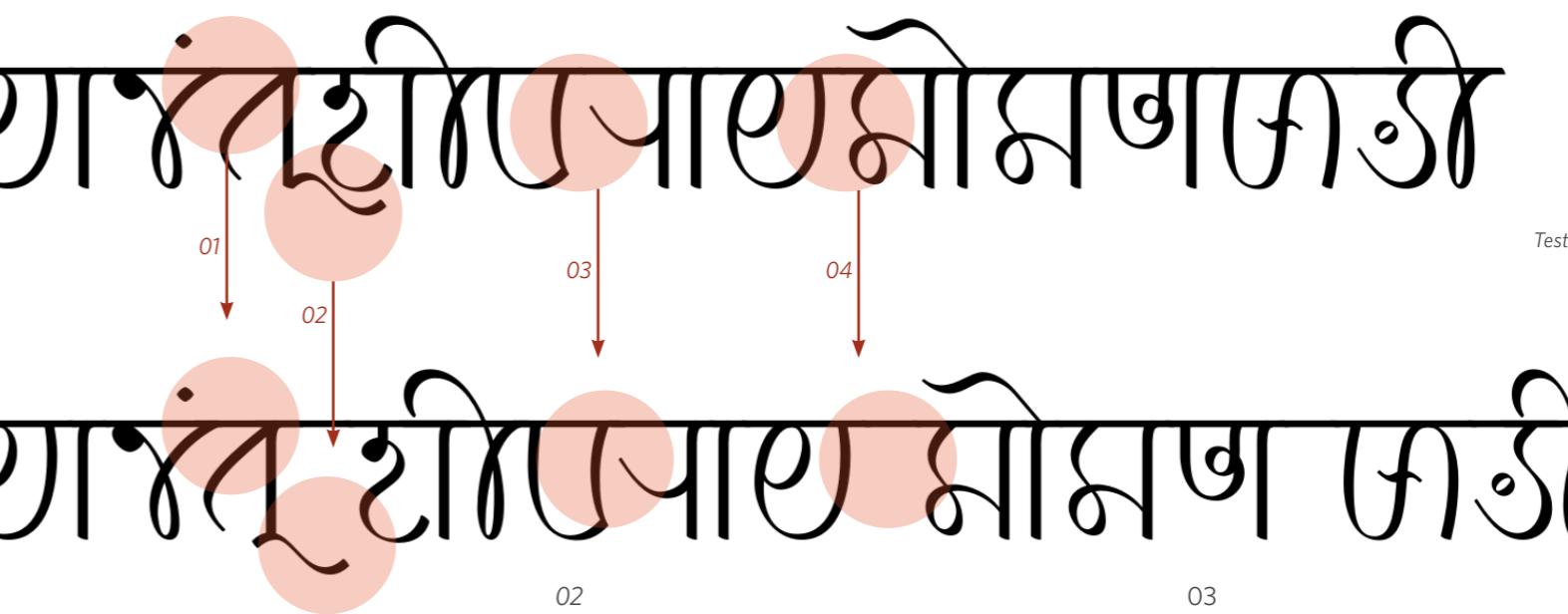


A careful process of adjustment was carried out to achieve optimal spacing of metrics alongside character balance. The letterforms faced a spacing analysis by testing the word "पापी" within the evaluation process. This phrase is placed in front of characters and behind them to help adjust the space.

Letterform combinations were created for analyzing how to obtain harmonious right and left spacing elements. The strategic positioning of letters in multiple contexts allowed for complete assessment of spacing dimensions in each individual letterform. Letterform combinations were created for analyzing

how to obtain harmonious right and left spacing elements. The strategic positioning of letters in multiple contexts allowed for complete assessment of spacing dimensions in each individual letterform.

## 07. Final Iterations

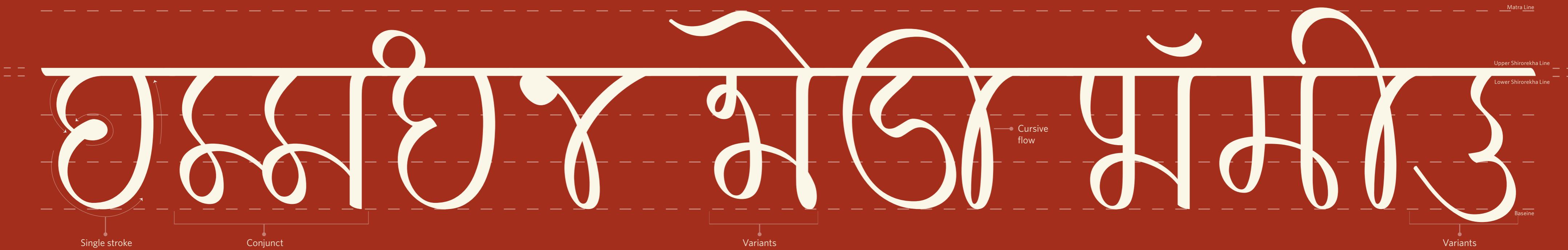


The first rounds of metrics produced unsightly inconsistency in letterform spacing which occurs typically when different orthography shapes are applied. The evaluation of test phrases helped detect particular kerning pairs which needed correction. A visual inspection revealed that the pairing of 'ज' (outward curve) then 'त' (inward curve) required immediate reduction of their spacing distance. The issue was resolved by making the letters closer together.

Letterforms with inward curves and outward protrusions require tight kerning. Several letters in Môdi script are linked by its flowing nature. The characters in Môdi show no distinct spacing which turns into an absence of word separation. Standard word spacing is used since it makes text easier to read and allows transcription.

*Modi Script Type Design*

Dakkhan Modi Typeface



# Dakkhan Modi Regular

## //01 Calligraphic style

The Dakkhan Modi family contains four separate style choices including Regular, Bold, Italic as well as Ink. The typeface embodies the very essence of the Modi script- the cursive nature. The contemporary digital typeface mirrors traditional hand-written feel a boru pen and ink to preserve the scripts historic beauty for modern needs. Although respecting the script's functional aspects the typeface integrates attractive designs to enhance its letterforms.

## //02 Single-stroke characters

A single extended pen movement by the scribe produced all Modi letterforms. The cursive nature of this script emerged as its distinct defining characteristic from this writing system. Each character within the Dakkhan Modi Typeface follows this cursive design principle by offering an easy single-stroke path for writing like pen movements of the hand. The historical authenticity remains intact which produces a harmonized visual effect.

## //03 Context specific characters

Contextual adaptability is one of the reasons why the Modi script shows its extraordinary beauty and structural intricacy. The script contains characters that need specific changes or unique presentation depending on word placement or letter pairing and phonetic requirements of each syllable.

## //04 Multi-style characters

The Modi script, with its historical roots in rapid, handwritten communication, naturally developed a degree of flexibility in its letterforms. This resulted in the presence of allographs - different visual representations of the same underlying character. The Dakkhan Modi typeface includes these allographic variations, adding to the scripts beauty.

## //05 Multi- era style

The Dakkhan Modi typeface embodies a multi-era stylistic approach, intentionally drawing inspiration from the evolution of the script across different historical periods. Rather than adhering strictly to a single era's conventions, each weight and style presenting a unique facet of Modi's rich history. This fusion allows the typeface to embody the efficiency and stylistic nuances that developed over time.

ਈ ਏ ਈ ਈ ਟੀ ਟੀ ਕਾ ਕਾ ਲ ਲ ਈ  
 ਈ ਏ ਈ ਮ ਈ ਗ ਘ ਤ ਤ ਈ  
 ਝ ਜ ਤ ਤ ਤ ਟ ਟ ਬ ਤ ਪ ਪ ਈ  
 ਧ ਪ ਮ ਪ ਮ ਮ ਲ ਤ ਧ ਪ ਧ  
 ਧ ਉ ਹ ਕ ਥ ਥ ਥ ਥ ਥ

ਤੀ ਮ ਮ ਮ ਮ ਮ ਸ ਸ ਸ ਹ ਹ ਹ  
 ਤ ਪ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ  
 ਮ ਅ ਗ ਪ ਪ ਅ ਮ ਮ ਮ ਨ ਨ  
 ਧ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ  
 ਤੀ ਤੀ ਤੀ — — — — — —  
 ਤੀ ਤੀ ਤੀ — — — — — —  
 ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ ਤ

# Sample Text

ਪਮਣਾਧੀਇਥਾਧੂਠਾਂ ਤੀਤੁਜਤ ।  
ਥਾਧੂਠਾਂ ਤੀਤੁਜਾਲੋਇ ਤਮਸ ॥੧॥  
ਥਾਧੂਠ ਤੀਤਮੁਖਮਾਣੀਣਾਂ ਤੀਤੀਪਾ ।  
ਥਾਧੂਠ ਪ੍ਰਤੁਇ ਪ੍ਰਤੁਮਨੀਲ ॥੨॥  
ਤੀਲਮਹਿਣੇਪ੍ਰਥਾਧੂਠ ਤੀਧ ਹੇਪ ।  
ਥਾਧੂਠ ਤੀਗੋਪਾਲਮਨਸ ॥੩॥

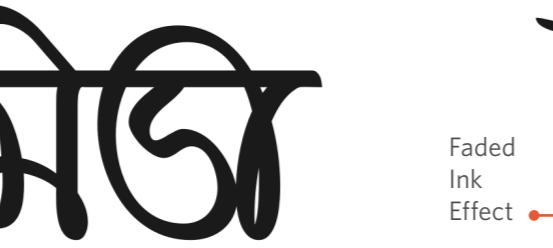
## Variations

Digital Modi script fonts operate within a deficient environment because they lack various weight-level options. This means that for most Modi fonts available today, one will typically find only one or perhaps a very limited selection of styles, usually a regular or standard weight. Here we explore the potential possibilities to arrive at the optimal style for the typeface.

Reduced weight (-2)



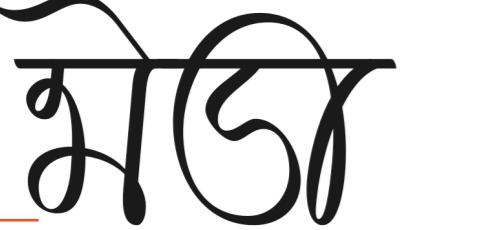
Increased weight (10)



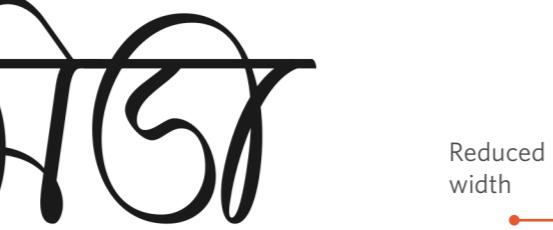
Faded Ink Effect



Slant angle 5°



Slant angle 10°



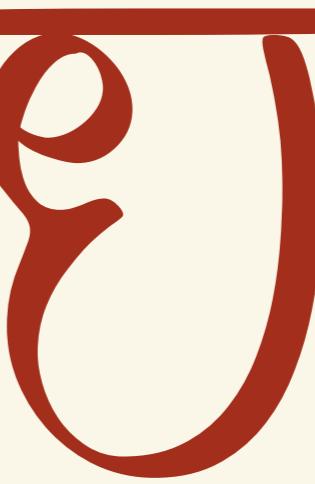
## Family

01// BOLD



Weight

02// INK



Weight

03// SLANT



Weight

Style

Heavy

Style

Ink Bleed

Style

Italic

Dakkhan Modi// Regular

ਧਾਰਾ

Dakkhan Modi// Bold

ਧਾਰਾ

18 pt

Dakkhan Modi/ Slant

ਧਾਰਾ

Dakkhan Modi// Ink

ਧਾਰਾ

18 pt

## Sample Text

---

ਧਮਾ ਧੀ ਇਤ ਧਾਰਾਂਤੀਤ ਜਤੇ ।  
ਧਾਰਾਂਤੀਤ ਧਾਰੇ ਇਤ ਨਸ ॥੧॥  
ਧਾਰਾਂਤੀ ਧਮੁੜਮ ਜੀਪਾਤੇ ਜੀਪਾ ।  
ਧਾਰ ਪੜ ਇਤ ਜਾਸਨ ॥੨॥  
ਤੀਜਾ ਮਧਿ ਧਧ ਧਾਰਾਂਤੀ ਧ ਹੇਠ ।  
ਧਾਰਾਂਤੀ ਗੱਧ ਪੁਸ਼ ਨਸ ॥੩॥

*Bold 18 pt*

ਧਮਾ ਧੀ ਇਤ ਧਾਰਾਂਤੀਤ ਜਤੇ ।  
ਧਾਰਾਂਤੀਤ ਧਾਰੇ ਇਤ ਨਸ ॥੧॥  
ਧਾਰਾਂਤੀ ਧਮੁੜਮ ਜੀਪਾਤੇ ਜੀਪਾ ।  
ਧਾਰ ਪੜ ਇਤ ਜਾਸਨ ॥੨॥  
ਤੀਜਾ ਮਧਿ ਧਧ ਧਾਰਾਂਤੀ ਧ ਹੇਠ ।  
ਧਾਰਾਂਤੀ ਗੱਧ ਪੁਸ਼ ਨਸ ॥੩॥

*Slant 18 pt*

ਧਮਾ ਧੀ ਇਤ ਧਾਰਾਂਤੀਤ ਜਤੇ ।  
ਧਾਰਾਂਤੀਤ ਧਾਰੇ ਇਤ ਨਸ ॥੧॥  
ਧਾਰਾਂਤੀ ਧਮੁੜਮ ਜੀਪਾਤੇ ਜੀਪਾ ।  
ਧਾਰ ਪੜ ਇਤ ਜਾਸਨ ॥੨॥  
ਤੀਜਾ ਮਧਿ ਧਧ ਧਾਰਾਂਤੀ ਧ ਹੇਠ ।  
ਧਾਰਾਂਤੀ ਗੱਧ ਪੁਸ਼ ਨਸ ॥੩॥

*Ink 18 pt*

# *Character Design Devanagari*

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- Introduction
- Varnamala
- Features of Modi
- Integrating Modi
- Glyph Cards
- Font Design Workflow
- Final Typeface



# Introduction

This typeface reimagines Devanagari by drawing inspiration from the historical Modi script. Modi, lends its fluidity and efficiency to address some of Devanagari's inherent structural limitations. Here we explore design that seeks to enrich contemporary Devanagari typography.

The aim is to provide a fresh, yet historically grounded aesthetic, expanding the stylistic options available to Devanagari, and ultimately enhancing its versatility and visual appeal in the modern context.

Devanagari remains a vital script for millions across India, Nepal, and beyond, creating a growing demand for typefaces that are both functional and aesthetically diverse. By incorporating elements of Modi in Devanagari, it forges a connection with the past while pushing the boundaries of modern design. A visually similar multi script typeface enhances accessibility and visual relatability, proving invaluable for modern readers and digital humanities projects that frequently involve the transcription and translation of historical documents.

# Varnamala

## Vowels

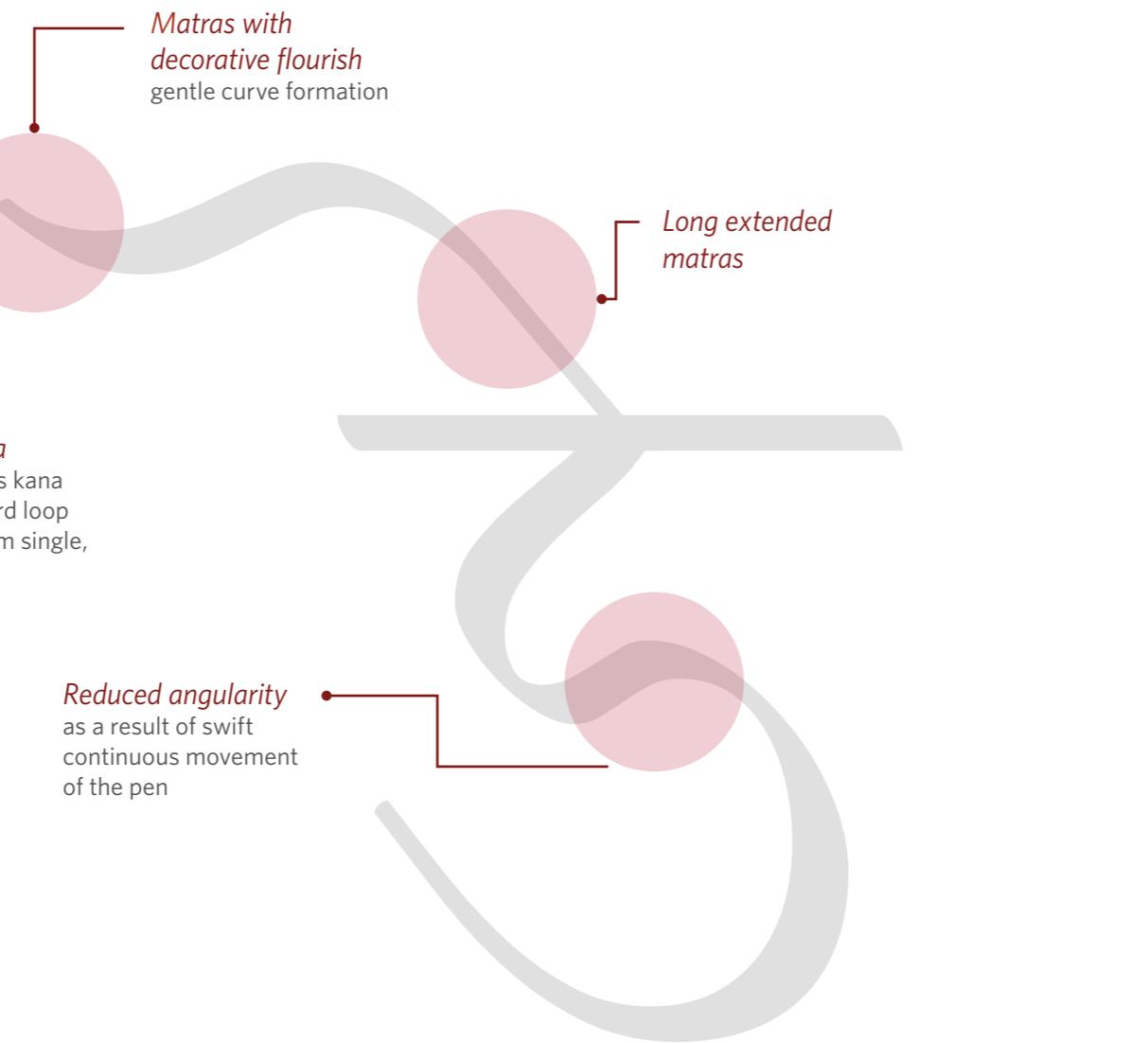
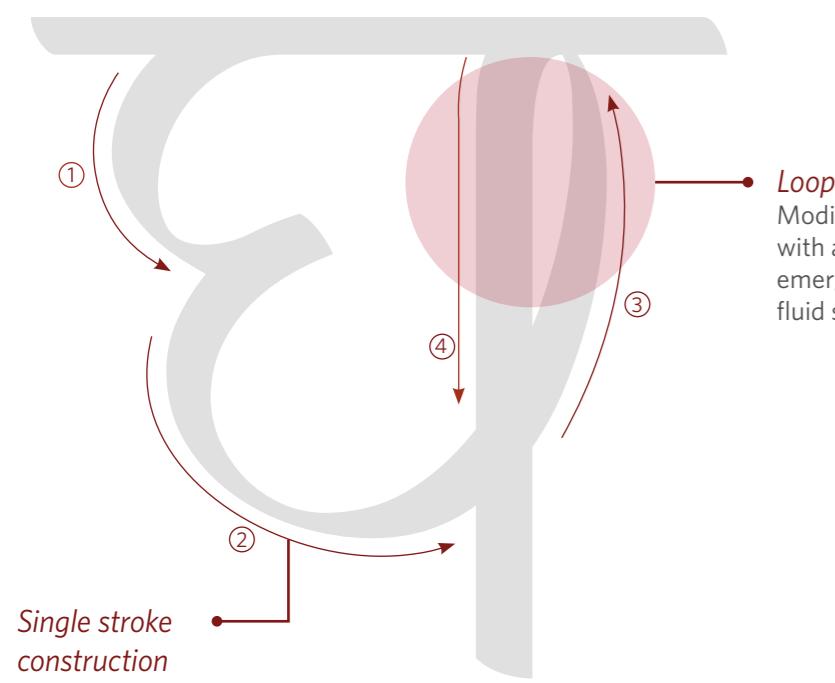
अ आ इ ई उ ऊ ए ई ओ औ अं अः

## Consonants

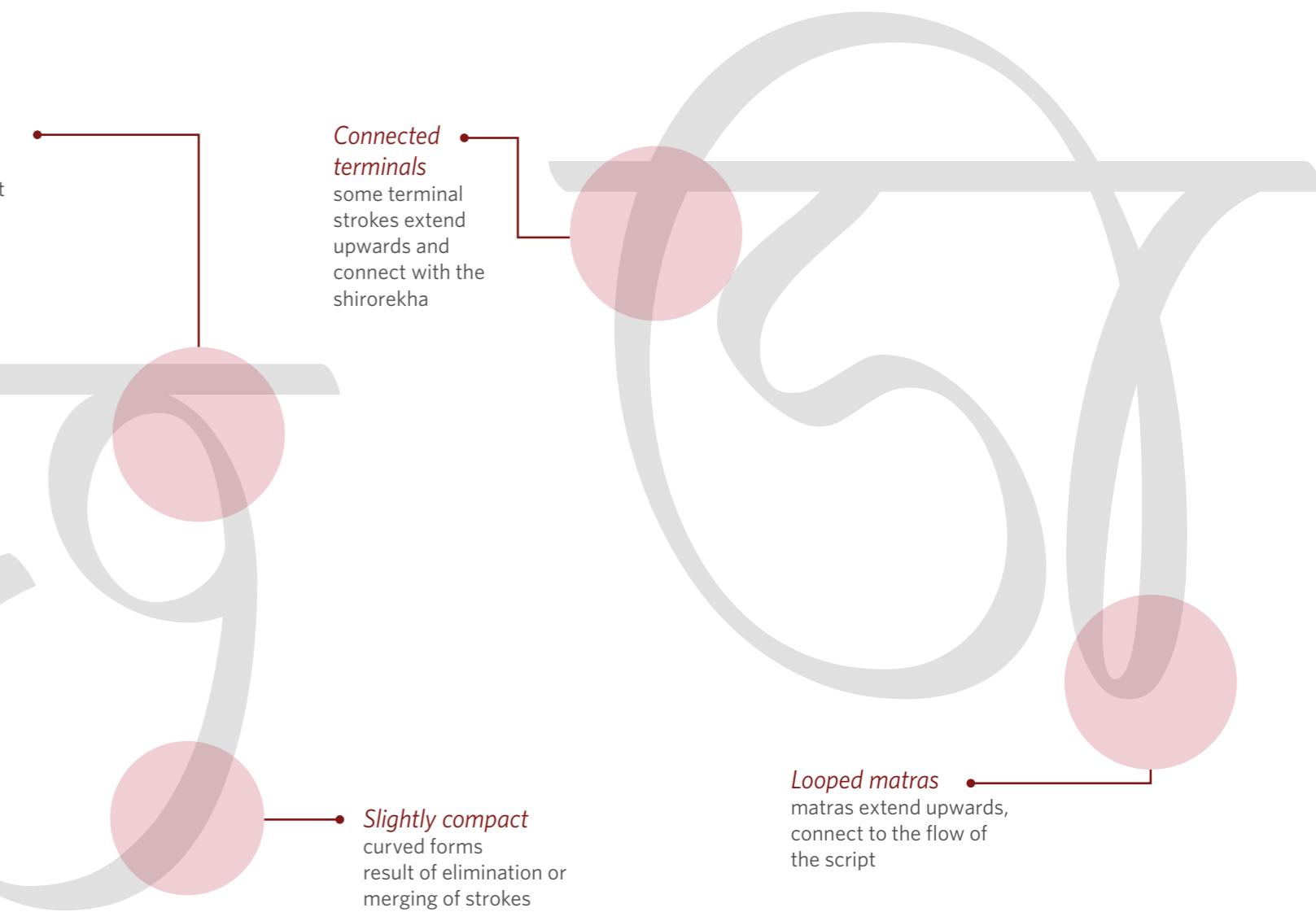
क ख ग घ ड च छ ज झ झ  
ट ठ ड ढ ण त थ द ध न  
प फ ब भ म य र ल व श  
ष स ह ळ क्ष झ

# Features of Modi

For capturing the essence of Modi script into Devanagari framework, it was essential to capture and identify its key features. Comparison between commonalities allows for distinction of separate characteristics between them. Adaptation becomes possible through this method.



**Reduction of strokes**  
some strokes that would typically connect the letterform to the shirorekha are absent



# Similar Characters

## Characters

An analysis between Devanagari script and Modi script validated their common visual characteristics. The character set's relationships spanned from identical forms to entirely dissimilar ones which did not show any shared visual characteristics.

Observe the highlighted letterforms in table 2. Here the highlighted letterforms from Modi as well as Devanagari are either identical or share similar visual characteristics.

MODI	DEVANAGARI	MODI	DEVANAGARI	MODI	DEVANAGARI
અ	ગ	ગ	ઘ	ધ	ધ
આ	ઘ	ઘ	જ	ન	ન
ઇ	ડ	ડ	ઝ/પ	પ	પ
ઈ	રુ	રુ	ફુ	ફ	ફ
િ	રુ	રુ	ઘ	બ	બ
જિ	જુ	જુ	મુ	ભ	ભ
ક્રા	ક્રા	ક્રા	પ્રા	મ	મ
ક્રાફ	ક્રાફ	ક્રાફ	એ	ય	ય
લ	લુ	રુ	ઝ	ર	ર
લુ	લુ	ઠુ	ઝુ	લ	લ
શે	એ	ડુ	પુ	વ	વ
શો	એ	ઢુ	ણુ	શ/શ	શ/શ
ઓ	ા	ણ	ષ	ષ	ષ
ઓં	ત	ત	ઊ	સ	સ
ક	ઘ/થ	થ	એ	હ	હ
છ	એ	દ	કુ	લ	લ

## Form wise Categorization

Recurring form	Family	Recurring form	Family
ਅ	ਅ ਆ ਤ ਊ ਔ ਔ	ਏ	ਏ ਛ ਛ ਧ
ਇ	ਇ ਈ ਙ ਝ ਙ ਹ	ਓ	ਓ ਜ ਜ
ਤਰ	ਤਰ ਤਰ ਤਰ	ਟ	ਟ ਠ ਠ ਦ
ਏ	ਏ ਏ	ਣ	ਣ ਪ ਫ
ਕ	ਕ ਬ ਵ ਲ਼	ਲ	ਲ ਲ ਲ ਲ
ਰ	ਖ ਥ ਧ ਰ ਸ਼ ਸ਼ ਸ		ਚ
ਨ	ਗ ਨ ਭ ਮ		

# Explorations

Explorations were done to chose the most legible character that refelcted the essence of Modi, by adapting its features, and visual characteristics.

ଅ  
Selected

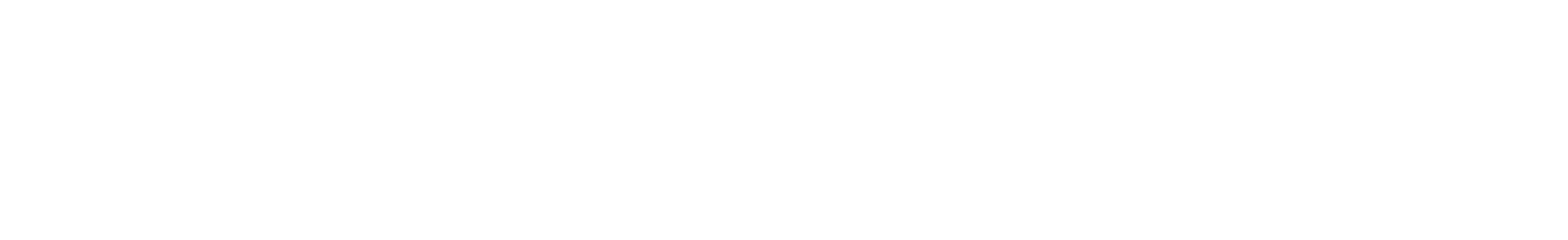
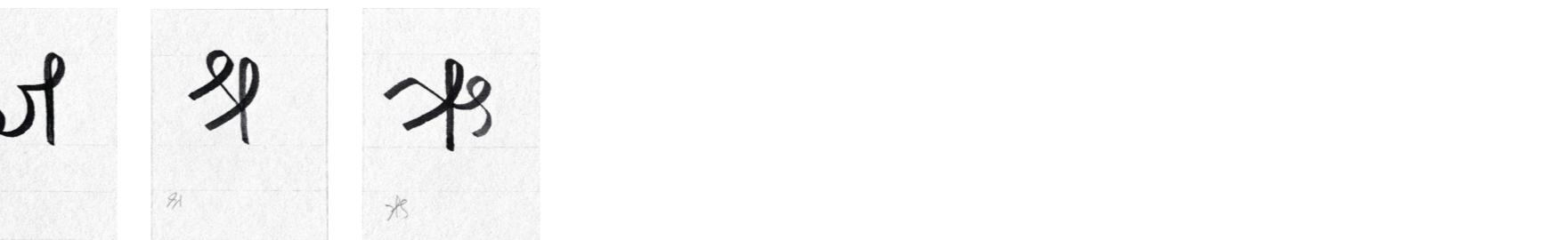
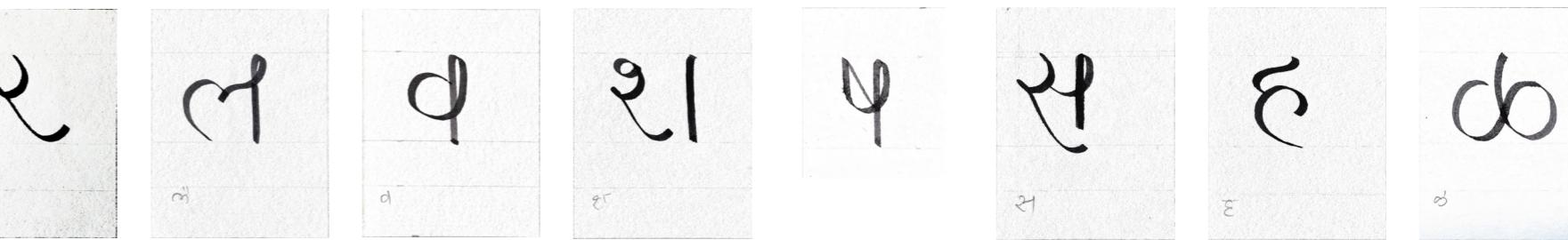
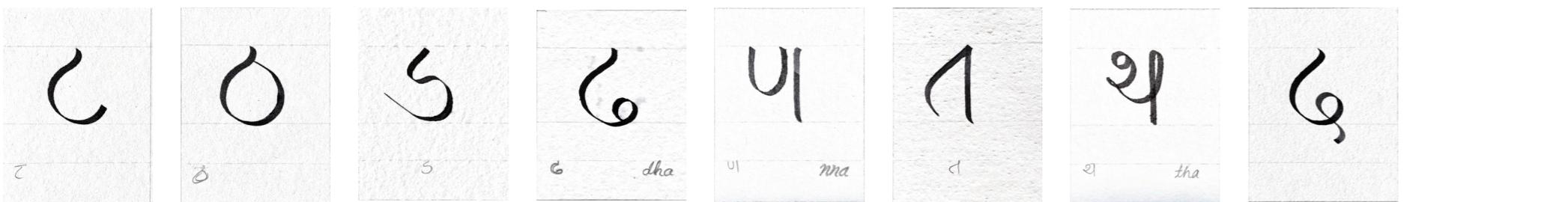
ବ  
Selected

ଫ  
Selected

ଶ  
Selected

ହ  
Selected

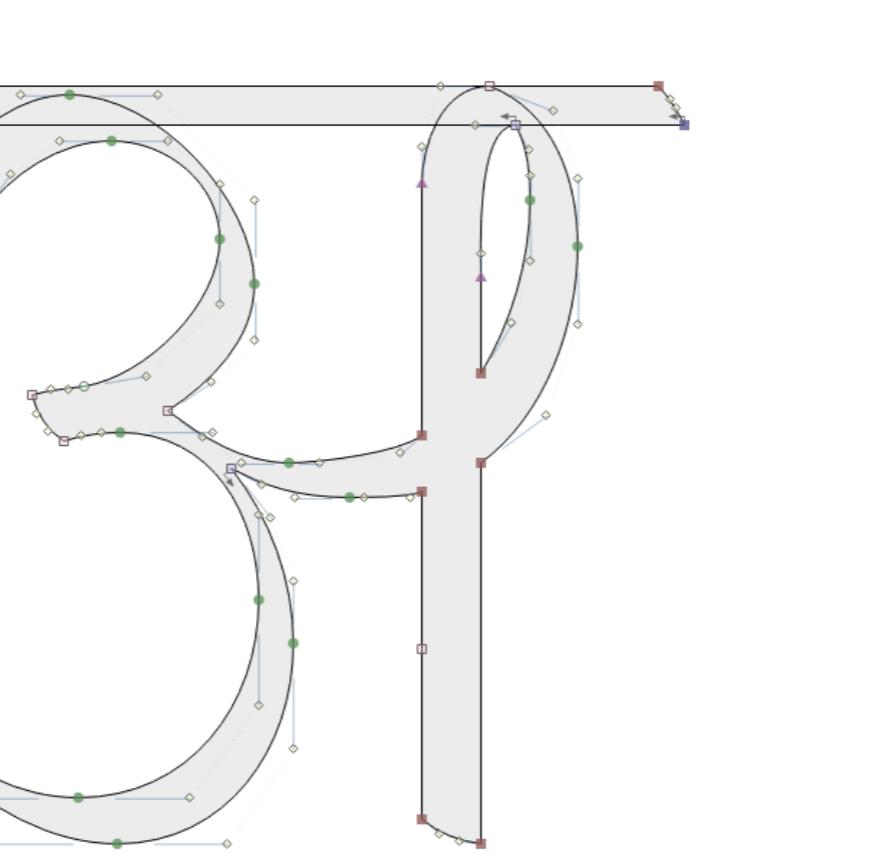
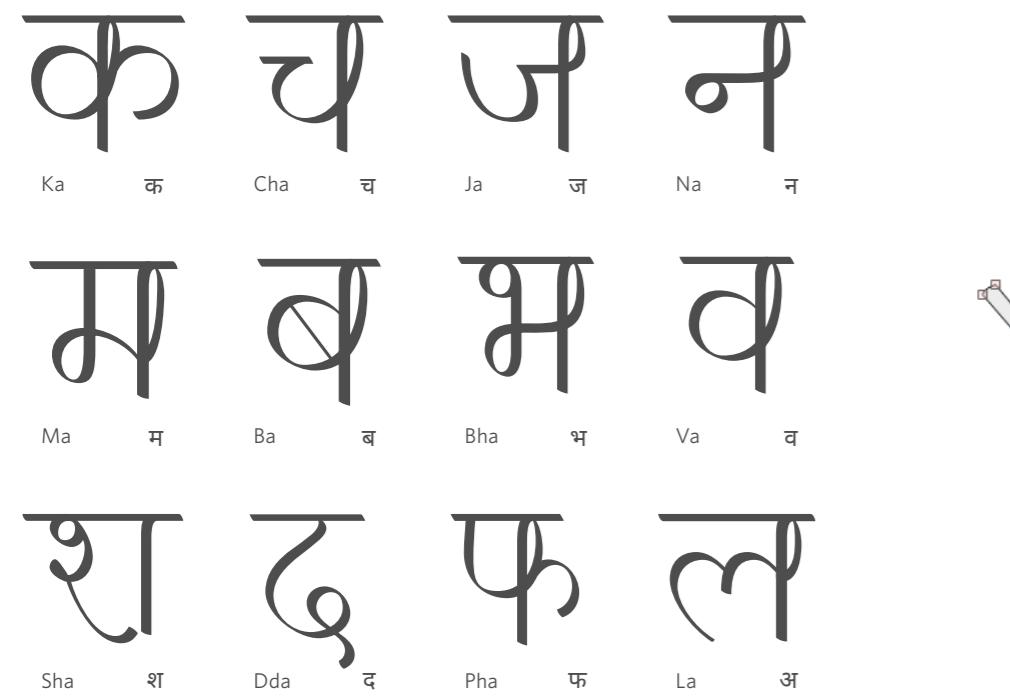
## Final Glyph Cards



# Designing in FontLab

The subsequent phase involved glyph development within FontLab. To determine appropriate weight, width, and height parameters, a limited set of letterforms that showcased diverse forms and orthographic representations were designed.

## Glyphs



# Reflection

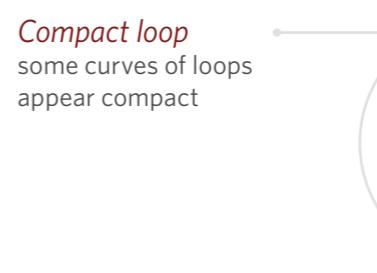
The designed glyphs underwent rigorous analysis at various point sizes to identify any orthographic anomalies. This analysis revealed that the glyph weight, particularly in smaller point sizes, resulted in visual haziness, hindering readability.

The inconsistent distribution of weight across counters and loops along with knots created disruptions in the visual elements of the font design.

**Inconsistent flow**  
glyphs demonstrate a thin stroke weight



**Compact loop**  
some curves of loops appear compact



**Sharp bar**  
small vertical stems appear sharp



**Rigid bar**  
the bar connecting the loop and the stem appears very rigid



**Small loops**  
small loops with small counter spaces appear as knot at smaller point sizes



**Angular stroke**  
at smaller sizes, angular strokes appear to disconnect from curves



**Illegibility at lower point sizes**  
closed spaced knots appear as loops



**Tight loops**  
result in sharpness in the loop



# The Process

## Phase 1

### Foundational Glyphs

The initial phase involves the designing of the core character set: individual consonants, independent vowels, and numerals, establishing the fundamental visual framework of the typeface.

## Phase 2

### Vowel Integration

Integration of vowel diacritics (matras), emphasizing accurate placement and harmonious visual connection to ensure phonetic accuracy.

## Phase 3

### Conjunct Ligatures

Conjunct ligatures (including vertical stacking) and a set of punctuation marks are designed to facilitate clear and accurate representation.

## Phase 4

### Metric Spacing

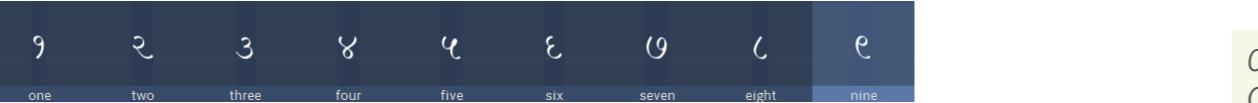
Overall proportional relationships within the glyph as well as in its relationship with other glyphs are established in this phase to ensure consistent visual rhythm and legibility across the typeface.

## Phase 5

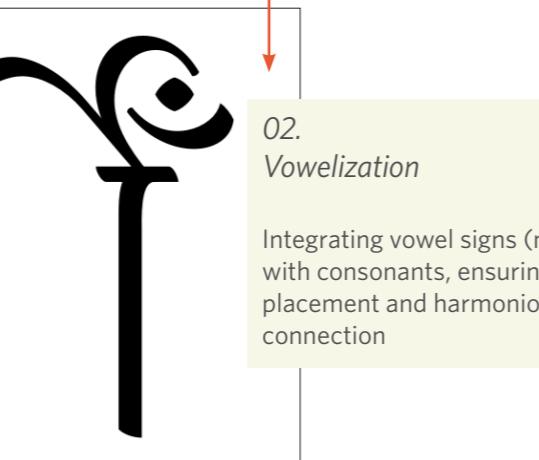
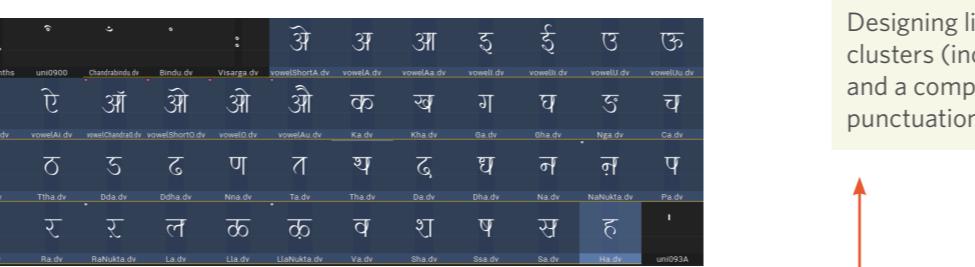
### Spacing and Refinement

The final phase involves process of spacing and iteration, adjusting inter-glyph spacing (kerning) and inter-word spacing to optimize readability.

### 01. Letterforms

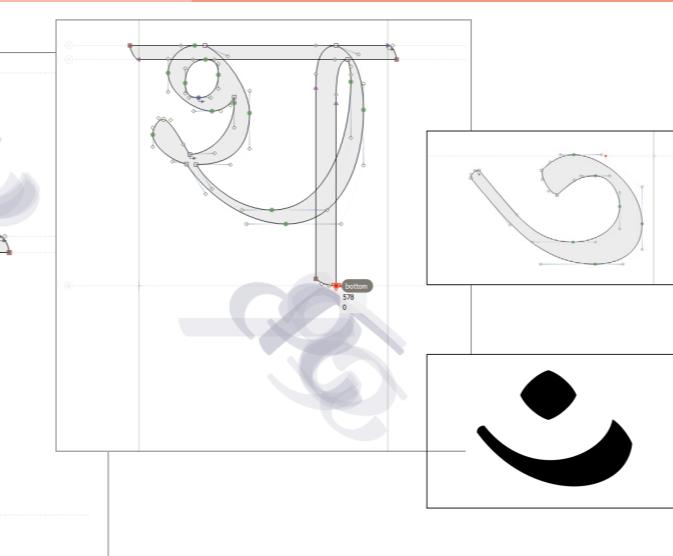


Designing the core set of individual consonants, vowels, and numerals, establishing the typeface's basic character set.



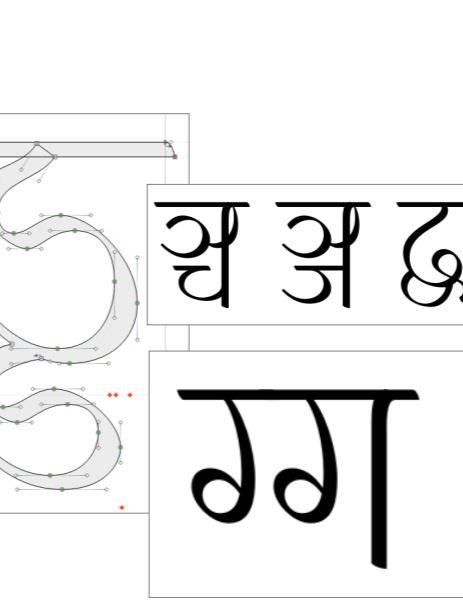
### 02. Vowelization

Integrating vowel signs (matras) with consonants, ensuring proper placement and harmonious visual connection.



### 03. Conjuncts, Punctuations

Designing ligatures for consonant clusters (including vertical stacking) and a comprehensive set of punctuation marks for readability



### 04. Metrics

Establish crucial measurements within the letterform to balance overall proportions for consistent visual flow.



### 05. Spacing

Meticulously adjust letter spacing (kerning) and word spacing through multiple iterations for optimal readability and aesthetic balance.



*Modi-inspired Devanagari Script Type Design*

Dakkhan Devanagari Typeface

# Dakkhan Devanagari Regular

graphic style

Dakkhān Devanagari family incorporates four variants of calligraphic modulated typeface—Bold, Italics, and Ink. This typeface discounts the rigidity of the traditional Devanagari script. The boru (reed pen) with ink served as the primary tool to create this typeface which maintains the traditional charm in its present-day applications. The typeface keeps its functional aspect while the typeface also exhibits its artistic elegance.

The Modi letterform is a bold, rounded, and fluid script that stays close to the traditional Devanagari script. The Modi script achieved its unique character through this approach. The letterform is based on the strokes in the Dakkhān Devanagari script, which is a cursive heritage pen script. The letterform's fluid movement into simple strokes and the rounded forms upholds historical and traditional elements maintaining the originality of the script.

exist as a result of writing continuous without interruption. The exclusive fluid and natural rhythm is unique to writing. Each character in the Deccan Devanagari Typeface follows this principle to merge natural hand stroke writing. The typeface maintains its authenticity because its coherence is consistent with the design elements.

While the Modi script was specifically used to write Marathi, the Deccan Devanagari typeface supports a broader system of languages written in the Devanagari script. These languages include- Hindi, Marathi, Konkani, Kashmiri, Nepali, Rajasthani, Sindhi and Sanskrit and Bodo.

cially used to write  
typeface supports  
ritten in the  
es include- Hindi,  
li, Rajasthani, Sindhi



ਅ ਆ ਇ ਈ ਉ ਊ ਋ ਲ ਏ ਏ ਓ  
 ਔ ਕ ਖ ਗ ਘ ਊ ਚ ਛ ਜ ਝ ਜ  
 ਟ ਠ ਡ ਟ ਣ ਤ ਥ ਟ ਧ ਨ ਪ  
 ਫ ਬ ਮ ਮ ਧ ਰ ਲ ਵ ਸ਼ ਷ ਸ  
 ਨ ਕ ਲ ਥ ਜ ਅੰ ਋ ਲ

ਕ ਖ ਗ ਜ ਤ ਟ ਫ ਯ ਘ ਨ ਔ  
 ਸ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ  
 ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ  
 ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ  
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 ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ ਿ

ਕਕਕ ਕਖਕ ਕਜਕ ਕਝਕ ਕਟਕ ਕਣਕ ਕਤਕ  
ਕਫਕ ਕਨਕ ਕਪਕ ਕਪਕ ਕਮਕ ਕਧਕ ਕਲਕ ਕਵਕ  
ਕਰਕ ਕਖਕ ਖਕਕ ਖਲਕ ਖਾਕਕ ਖਮਕ ਖਧਕ ਖਵਕ  
ਖ਼ਕਾਕ ਗਾਕ ਗਧਕ ਗਜਕ ਗਣਕ ਗਫਕ ਗਧਕ ਗਨਕ  
ਗ਼ਕਾਕ ਗਮਕ ਗਮਕ ਗਧਕ ਗਵਕ ਗਸਕ ਗ਼ਵਕ  
ਘਮਕ ਘਧਕ ਘਵਕ ਘਚਕ ਘੁਕਕ ਘਮਕ ਘੁਵਕ  
ਝਮਕ ਝਧਕ ਝਵਕ ਝਚਕ ਝੁਕਕ ਝਮਕ ਝੁਵਕ  
ਝਮਕ ਝਧਕ ਝਵਕ ਝਚਕ ਝੁਕਕ ਝਮਕ ਝੁਵਕ

ਣਣ ਣਮ ਣਯ ਣਵ ਤ ਤਪ ਤਫ ਤਖ  
ਖਵ ਘੁ ਘਮ ਘਧ ਘਵ ਨਕ ਨਗ ਨਖ  
ਨਈ ਨਵੁ ਨਧ ਨਫ ਨਮ ਨਮਾ ਨਈ ਨਵ  
ਨਹਾ ਨਸੁ ਨਹ ਪਉ ਪਟ ਪਾ ਪ੍ਰੁ ਪਿ  
ਪਿਕ ਪਮ ਪਿ ਪਲ ਪਿ ਪਿਆ ਪਸੁ ਪਿਜ  
ਪਟ ਪਤ ਪਿਥ ਪਿਪ ਪਿਫ ਪਿਧ ਪਿਲ ਪਿਰ  
ਲਿ ਲਕ ਲਿੁ ਲਿਕ ਲਿਮ ਲਿਧ ਲਿਵ ਲਿਸ

ਮਲ ਮਵ ਮਾ ਮਦ ਮੂ ਮਧ ਮਫ ਮਵ  
ਮਮ ਮਮ ਮਧ ਮਲ ਮਵ ਮਥ ਮਸ ਮਹ  
ਖ ਲਕ ਲਧ ਲਗ ਲਵ ਲਜ ਲਟ ਲਠ  
ਲਲ ਲਟ ਲਲ ਲਧ ਲਛ ਲਧ ਲਫ ਲਧ  
ਲਮ ਲਧ ਲਲ ਲਵ ਲਥ ਲਸ ਲਹ ਕੁਕ  
ਕਲ ਕਵ ਕਹ ਰਕ ਰਹ ਰਤ ਰਮ ਰਖ  
ਕਿ ਰਖ ਰਥ ਏ ਏ ਏ ਏ ਏ

ਏ ਏ ਏ ਏ ਏ ਏ ਏ ਏ ਏ  
ਸਾ ਸਥ ਸਥ ਸਨ ਸਧ ਸਫ ਸਖ ਸ਼ਮ  
ਸਧ ਸਲ ਸਖ ਸਥ ਏ ਫ਼ਾ ਮਾ ਲਾ  
ਰਕ ਰਹ ਰਟ ਰਤ ਰਮ ਰਖ ਰਖ ਰਖ  
ਲ ਕਲ ਗਲ ਲ ਪਲ ਫ਼ਲ ਲ ਮਲ  
ਮਲ ਲਲ ਕਲ ਸਲ ਫ਼ਲ ਨਿ ਮਧ ਫ਼ਲ  
ਕਤਵ ਕਪੁ ਕਵਧ ਛਮ ਛਧ ਛਵ ਕਰਟ ਕਰਤਾ

A 7x10 grid of 70 Devanagari characters, each with a small '+' sign below it, arranged in seven rows and ten columns. The characters are in a dark red font on a white background.

# Family

01// BOLD

ॐ

Weight

Bold

Style

Heavy

02// INK

ॐ

Weight

Regular

Style

Ink Bleed

03// SLANT

ॐ

Weight

Regular

Style

Italic

Dakkhan Devanagari// Regular

ॐ

Dakkhan Devanagari// Bold

ॐ

Dakkhan Devanagari// Slant

ॐ

Dakkhan Devanagari// Itlk

ॐ

## Sample Text

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आम्हा घरी धन शब्दांचीच रले ।  
शब्दांचीच शस्त्रे यले करु ॥९॥  
शब्दाचि आमुच्या जीवाचे जीवन ।  
शब्द वाटू धन जनलोका ॥१०॥  
तुका म्हणे पहा शब्दाचि हात्रेव ।  
शब्देचि गोरव पुजा करु ॥११॥

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Regular 32 pt

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Regular 18 pt

## Applications

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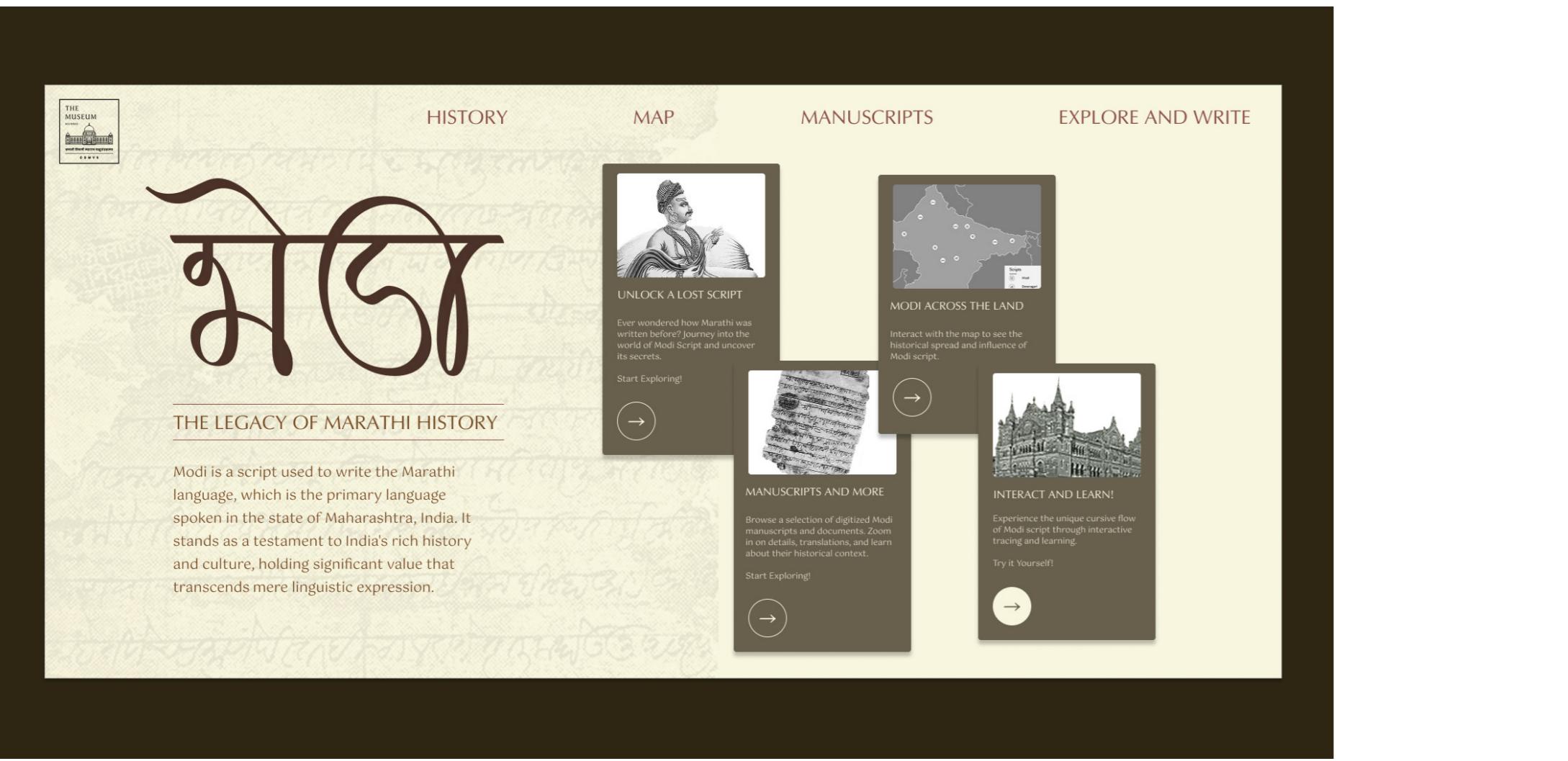
### CONCEPT 1

#### *Exploring the History of Modi Script:*

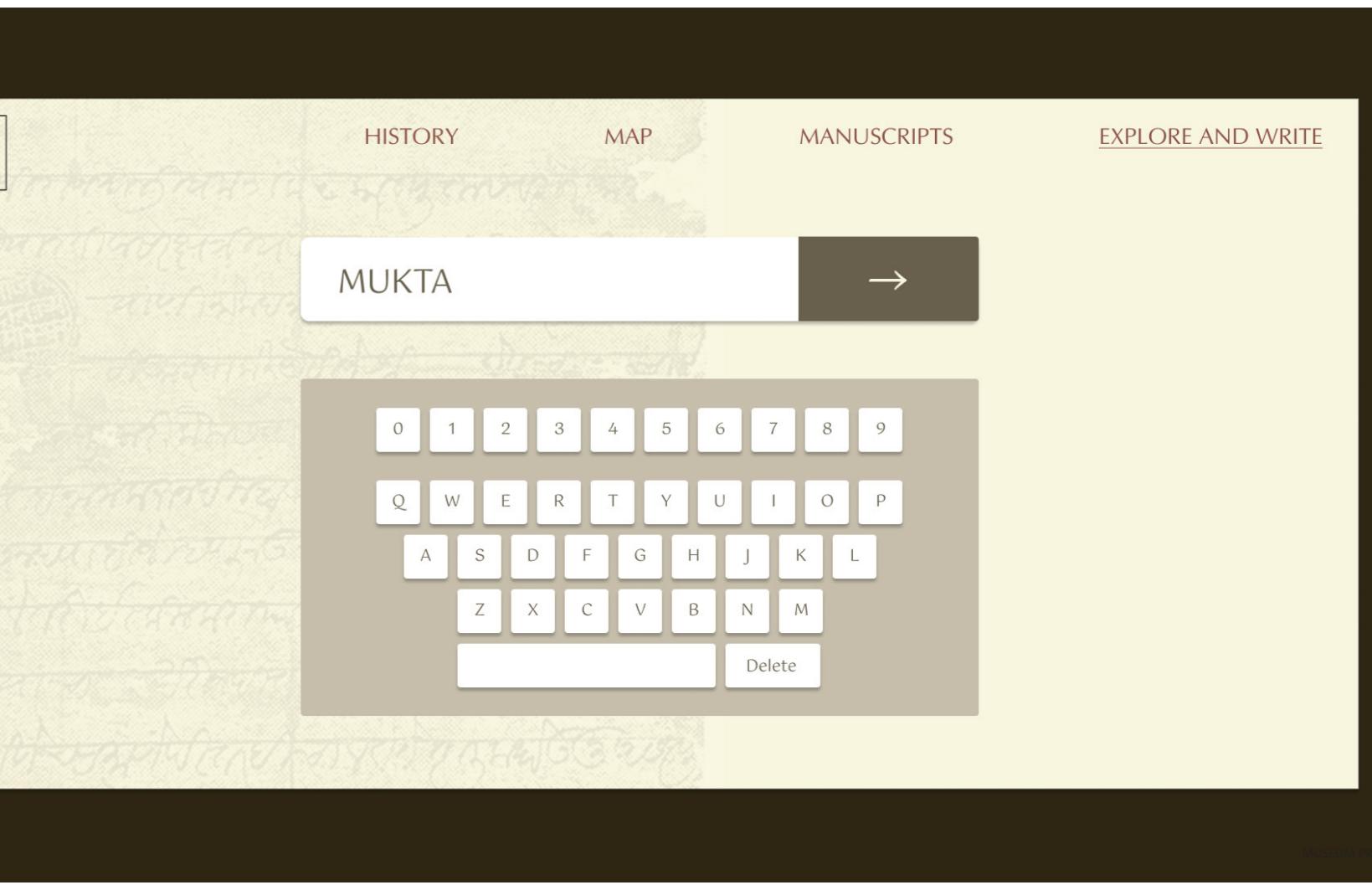
The Modi script information kiosk can serve as a bridge between the past and the present, connecting visitors to the rich history and cultural heritage of the Marathi language. Through interactive exploration and engaging experiences, the kiosk can breathe new life into the Modi script, ensuring its legacy continues to inspire and educate for generations to come.

The kiosk's interactive interface guides visitors through the fascinating history of the Modi script. From its origins as a practical script for administrative purposes to its eventual decline, the kiosk presents a chronological narrative, highlighting key milestones and cultural influences.

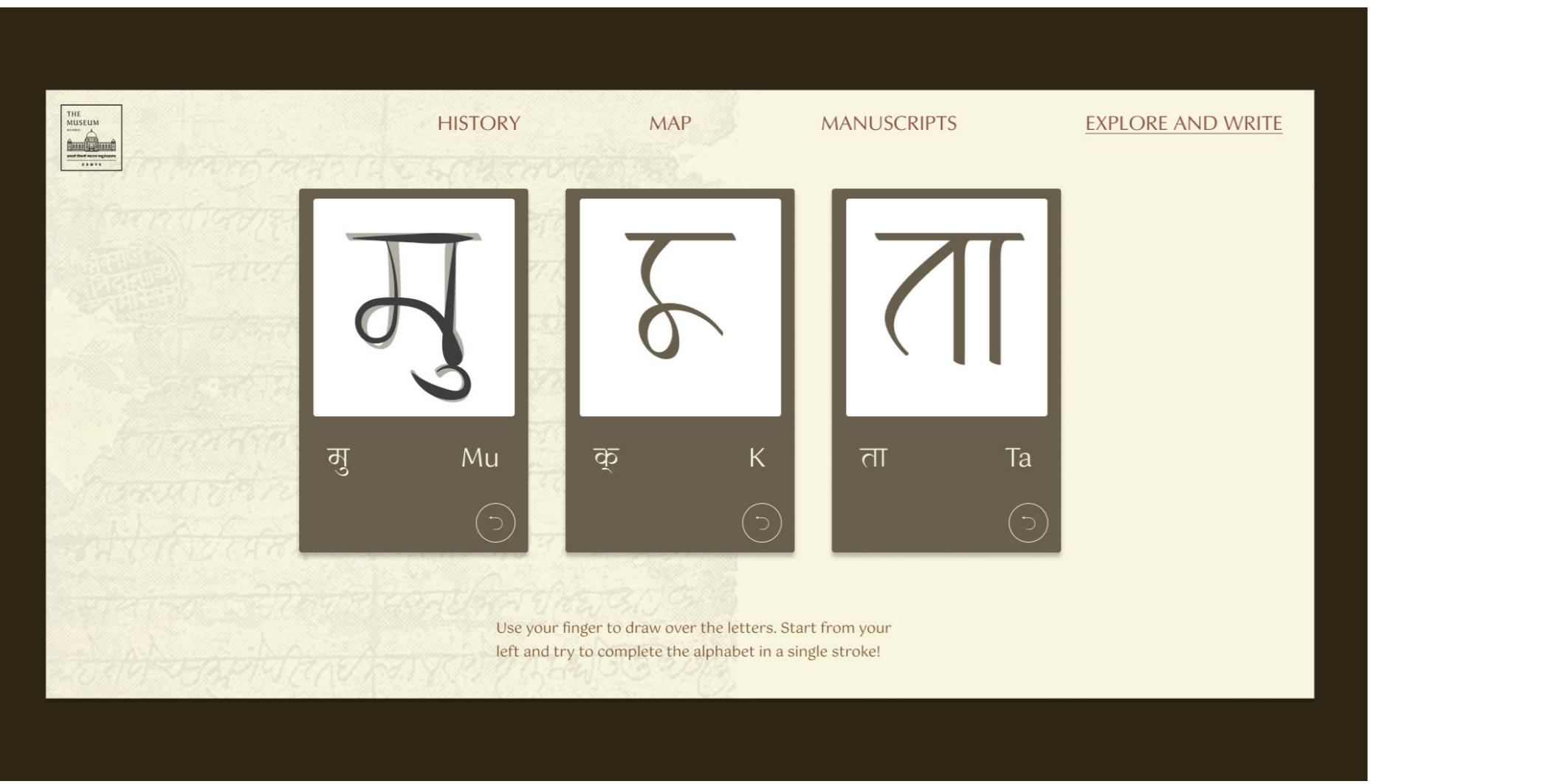




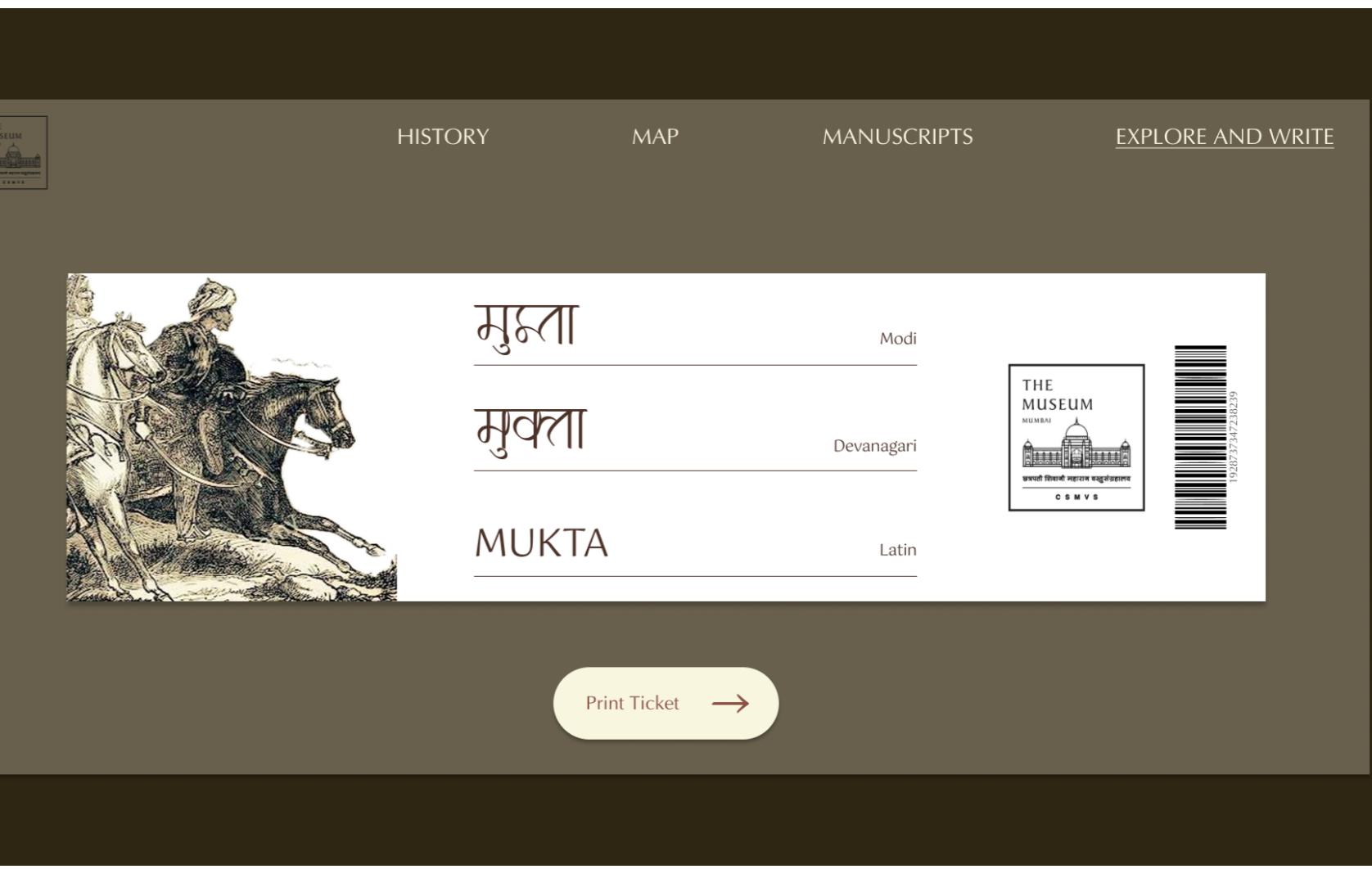
Welcome screen of Kiosk  
Tap on 'Interact and Learn' button to enter the Interactive Section.



Type your message/ name.



A new screen will appear with instructions for the tracing activity.  
Use your finger to trace over the provided path on the screen,  
following the direction of the arrows or guides.



Displaying a digital ticket with a message or your name written in the Modi script.  
Preview of how the ticket will look when printed.  
Look for a button labeled "Print Ticket", tap this button to send the ticket to the printer.

## Other Applications



Branding



Publication

# Conclusion

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The project culminated in the successful design of two typefaces: a Modi script typeface and a Devanagari typeface infused with Modi's aesthetic elements. This achievement not only preserved the historical significance of Modi script but also made it accessible in modern digital contexts.

Throughout the project, I gained valuable insights into the complexities of typographic preservation and adaptation. I learned how to balance cultural authenticity with contemporary design principles, ensuring that the essence of Modi script was retained while enhancing its usability.

The scope of this work extends beyond the creation of these typefaces. It offers a model for integrating historical scripts into modern digital environments, thereby preserving cultural heritage while making it relevant for future generations. The project's outcome has the potential to inspire further typographic innovations, bridging the gap between traditional scripts and modern media.

ଶ୍ରୀମତୀ

ଧ୍ୟାନାଂତିରି

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